

# **STIC Search Report**

**EIC 1700**

**STIC Database Tracking Number: 110188**

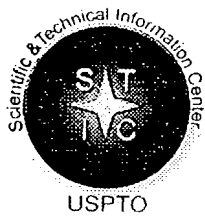
**TO: Sanza McClendon**  
**Location: REM 10D70**  
**Art Unit : 1711**  
**December 11, 2003**

**Case Serial Number: 10/000019**

**From: Kathleen Fuller**  
**Location: EIC 1700**  
**CP3/4 3D62**  
**Phone: 308-4290**

**Kathleen.Fuller@uspto.gov**

## **Search Notes**



# STIC Search Results Feedback Form

**EIC17000**

Questions about the scope or the results of the search? Contact *the EIC searcher or contact:*

Kathleen Fuller, EIC 1700 Team Leader  
308-4290, CP3/4-3D62

## Voluntary Results Feedback Form

- I am an examiner in Workgroup:  Example: 1713
- Relevant prior art **found**, search results used as follows:

- ☐ 102 rejection
- ☐ 103 rejection
- ☐ Cited as being of interest.
- ☐ Helped examiner better understand the invention.
- ☐ Helped examiner better understand the state of the art in their technology.

Types of relevant prior art found:

- ☐ Foreign Patent(s)
- ☐ Non-Patent Literature  
(journal articles, conference proceedings, new product announcements etc.)

- Relevant prior art **not found**:

- ☐ Results verified the lack of relevant prior art (helped determine patentability).
- ☐ Results were not useful in determining patentability or understanding the invention.

Comments:

Drop off or send completed forms to STIC/EIC1700 CP3/4 3D62



=> FILE REG

FILE 'REGISTRY' ENTERED AT 15:31:51 ON 11 DEC 2003  
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PLEASE SEE "HELP USAGETERMS" FOR DETAILS.  
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Property values tagged with IC are from the ZIC/VINITI data file provided by InfoChem.

STRUCTURE FILE UPDATES: 10 DEC 2003 HIGHEST RN 625425-12-9  
DICTIONARY FILE UPDATES: 10 DEC 2003 HIGHEST RN 625425-12-9

TSCA INFORMATION NOW CURRENT THROUGH JULY 14, 2003

Please note that search-term pricing does apply when conducting SmartSELECT searches.

Crossover limits have been increased. See HELP CROSSOVER for details.

Experimental and calculated property data are now available. For more information enter HELP PROP at an arrow prompt in the file or refer to the file summary sheet on the web at:  
<http://www.cas.org/ONLINE/DBSS/registryss.html>

=> FILE HCAPLUS

FILE 'HCAPLUS' ENTERED AT 15:31:55 ON 11 DEC 2003  
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FILE COVERS 1907 - 11 Dec 2003 VOL 139 ISS 24  
FILE LAST UPDATED: 10 Dec 2003 (20031210/ED)

This file contains CAS Registry Numbers for easy and accurate substance identification.

=> D QUE

L4	2214435	SEA FILE=REGISTRY ABB=ON	(F(L)C(L)H)/ELS
L5	62736	SEA FILE=REGISTRY ABB=ON	L4 AND PMS/CI
L6	52946	SEA FILE=HCAPLUS ABB=ON	L5
L7	16770	SEA FILE=HCAPLUS ABB=ON	L6(L) (PREP OR IMF OR SPN)/RL
L8	3160	SEA FILE=HCAPLUS ABB=ON	L7 AND COMPOSITION?
L9	79	SEA FILE=HCAPLUS ABB=ON	L8 AND CUR?(3A) (PHOTO? OR LIGHT? OR ENERGY?)
L10	102	SEA FILE=HCAPLUS ABB=ON	L8 AND (UV OR ULTRA? ) (3A) CUR?
L11	152	SEA FILE=HCAPLUS ABB=ON	L9 OR L10

*fluoropolymers*

L12 28 SEA FILE=HCAPLUS ABB=ON L11 AND (PHOTO? OR LIGHT) (3A)?POLYMERI  
?  
L13 54900 SEA FILE=REGISTRY ABB=ON L5 AND 3-30/F  
L14 36894 SEA FILE=HCAPLUS ABB=ON L13  
L15 13974 SEA FILE=HCAPLUS ABB=ON L14(L) (PREP OR IMF OR SPN)/RL  
L20 177 SEA FILE=HCAPLUS ABB=ON L15 AND (UV OR ULTRA? ) (3A)CUR?  
L21 100 SEA FILE=HCAPLUS ABB=ON L20 AND COMPOSITION?  
L24 27 SEA FILE=HCAPLUS ABB=ON L21 AND INITIAT?  
L25 45 SEA FILE=HCAPLUS ABB=ON L24 OR L12

=> D L24 ALL HITSTR 1-45

L24 ANSWER 1 OF 27 HCAPLUS COPYRIGHT 2003 ACS on STN

AN 2003:750818 HCAPLUS

DN 139:262274

ED Entered STN: 25 Sep 2003

TI Transparent functional films and yellowing-free coatings therefor  
IN Fukuda, Kenichi; Matsufuji, Akihiro; Hatakeyama, Kenichiro; Okawa,  
Atsuhiko

PA Fuji Photo Film Co., Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 27 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

IC ICM C08J007-04

ICS B32B007-02; C08L067-02

CC 42-7 (Coatings, Inks, and Related Products)

Section cross-reference(s): 38, 73

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2003268141	A2	20030925	JP 2002-72604	20020315
PRAI	JP 2002-72604		20020315		
AB	The functional films, useful as protective films for display panels, touch panels, glasses, etc., have coating layers satisfying thickness $\geq 10$ $\mu$ m and absorbance $\leq 0.60$ per thickness (mm) at wavelength 380 nm on transparent substrate films. The coating layers may be cured with diaryliodonium salts as polymerization <b>initiators</b> . Thus, a PET film having an antistatic primer layer was coated with a <b>composition</b> comprising poly(glycidyl methacrylate), trimethylolpropane triacrylate (Viscoat 295), radically photopolymn. <b>initiator</b> (Irgacure 184), and cationic photopolymn. <b>initiator</b> (UVI 6990) and exposed to UV to give a hard-coated film (coating thickness 40 $\mu$ m) showing pencil hardness 5H, absorbance 0.21/mm at 380 nm, and no yellowing initially and after 150-h exposure to light. An antireflective film was manufactured from the hard-coated film.				
ST	functional film yellowing free coating polyglycidyl methacrylate methylolpropane acrylate; cationic photopolymn <b>initiator</b> discoloration free coating antireflective film; transparent PET film cationic radically photocurable coating yellowing free				
IT	Coating materials ( <b>UV-curable</b> ; transparent functional films having yellowing-free hard coating layers)				
IT	Polyesters, uses RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses) (acrylic, high-refractive index layers; transparent functional films				

- having yellowing-free hard coating layers)
- IT Sulfonium compounds  
 RL: CAT (Catalyst use); TEM (Technical or engineered material use); USES (Uses)  
 (arene, triaryl, cationic photopolymn. **initiators**, hard coatings; transparent functional films having yellowing-free hard coating layers)
- IT Polymerization catalysts  
 (cationic, photochem.; transparent functional films having yellowing-free hard coating layers)
- IT Coating materials  
 (discoloration-resistant; transparent functional films having yellowing-free hard coating layers)
- IT Onium compounds  
 RL: CAT (Catalyst use); TEM (Technical or engineered material use); USES (Uses)  
 (iodonium, aryl, diaryl, cationic photopolymn. **initiators**, hard coatings; transparent functional films having yellowing-free hard coating layers)
- IT Antireflective films  
 (multilayer; transparent functional films having yellowing-free hard coating layers)
- IT Polyesters, uses  
 RL: TEM (Technical or engineered material use); USES (Uses)  
 (substrate films; transparent functional films having yellowing-free hard coating layers)
- IT Aromatic compounds  
 RL: CAT (Catalyst use); TEM (Technical or engineered material use); USES (Uses)  
 (sulfonium, triaryl, cationic photopolymn. **initiators**, hard coatings; transparent functional films having yellowing-free hard coating layers)
- IT Transparent films  
 (transparent functional films having yellowing-free hard coating layers)
- IT 57835-99-1, TPS 102 61358-25-6, BBI 102 75482-18-7, DTS 102  
 104558-95-4, Cyacure UVI 6990 106220-70-6, SP 150 125054-47-9, SP 170  
 178233-72-2, Rhodorsil 2074 247909-59-7, BBI 103  
 RL: CAT (Catalyst use); TEM (Technical or engineered material use); USES (Uses)  
 (cationic photopolymn. **initiators**, hard coatings; transparent functional films having yellowing-free hard coating layers)
- IT 25067-05-4P, Poly(glycidyl methacrylate) 36446-02-3P, Viscoat 295 homopolymer  
 RL: IMF (Industrial manufacture); POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
 (hard coatings; transparent functional films having yellowing-free hard coating layers)
- IT 465498-53-7P, Aronix M 5300-DPHA copolymer  
 RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
 (high-refractive index layers; transparent functional films having yellowing-free hard coating layers)
- IT **601484-78-0P**, Aronix M 5300-Megafac 531A-pentaerythritol tetraacrylate copolymer  
 RL: **IMF (Industrial manufacture)**; PRP (Properties); TEM (Technical or engineered material use); **PREP (Preparation)**; USES

(Uses)

(low-refractive-index layers; transparent functional films having yellowing-free hard coating layers)

IT 25038-59-9, Poly(ethylene terephthalate), uses

RL: TEM (Technical or engineered material use); USES (Uses)

(substrate films; transparent functional films having yellowing-free hard coating layers)

IT 601484-78-0P, Aronix M 5300-Megafac 531A-pentaerythritol tetraacrylate copolymer

RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(low-refractive-index layers; transparent functional films having yellowing-free hard coating layers)

RN 601484-78-0 HCAPLUS

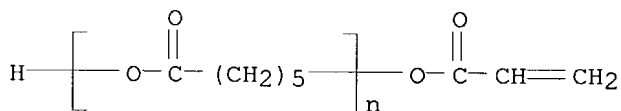
CN 2-Propenoic acid, 2,2-bis[[[1-oxo-2-propenyl)oxy)methyl]-1,3-propanediyl ester, polymer with 2-[[[heptadecafluorooctyl)sulfonyl]propylamino]ethyl 2-propenoate and  $\alpha$ -hydro- $\omega$ -[[1-oxo-2-propenyl)oxy]poly[oxy(1-oxo-1,6-hexanediyl)] (9CI) (CA INDEX NAME)

CM 1

CRN 97387-29-6

CMF (C6 H10 O2)n C3 H4 O2

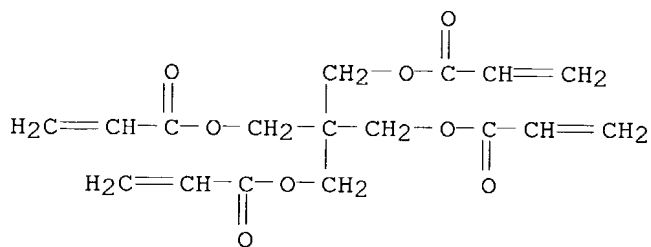
CCI PMS



CM 2

CRN 4986-89-4

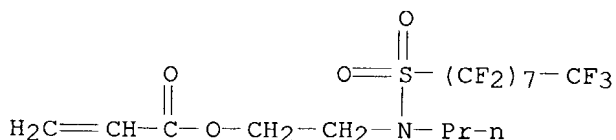
CMF C17 H20 O8



CM 3

CRN 2357-60-0

CMF C16 H14 F17 N O4 S



L24 ANSWER 2 OF 27 HCAPLUS COPYRIGHT 2003 ACS on STN  
 AN 2003:750817 HCAPLUS  
 DN 139:262273  
 ED Entered STN: 25 Sep 2003  
 TI Scratch-resistant transparent functional films and UV-absorbing hard coating layers therefor  
 IN Fukuda, Kenichi; Matsufuji, Akihiro; Hatakeyama, Kenichiro  
 PA Fuji Photo Film Co., Ltd., Japan  
 SO Jpn. Kokai Tokkyo Koho, 23 pp.  
 CODEN: JKXXAF  
 DT Patent  
 LA Japanese  
 IC ICM C08J007-04  
 ICS B32B007-02; H04N005-72; C08L067-02  
 CC 42-7 (Coatings, Inks, and Related Products)  
 Section cross-reference(s): 38, 73

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2003268140	A2	20030925	JP 2002-72603	20020315
PRAI	JP 2002-72603		20020315		

AB The functional films, useful as protective films for display panels, touch panels, glasses, etc., have coating layers satisfying thickness  $\geq 10 \mu\text{m}$  and light absorption  $\geq 4.0\%$  at wavelength 380 nm on transparent substrate films. Thus, a PET film having an antistatic primer layer was coated with a **composition** comprising poly(glycidyl methacrylate), trimethylolpropane triacrylate (Viscoat 295), radically photopolymn. **initiator** (Irgacure 184), and cationic photopolymn. **initiator** (UVI 6990) and exposed to UV to give a hard-coated film (coating thickness 40  $\mu\text{m}$ ) showing pencil hardness 5H and UV absorption 8.8% at 380 nm. An antireflective film was manufactured from the hard-coated film.

ST functional film UV shield coating polyglycidyl methacrylate methylolpropane acrylate; radically cationic photopolymn **initiator** UV shield coating antireflective film; PET film cationic radically photocurable coating UV shield

IT Coating materials  
 (UV-curable, UV-shielding;  
 scratch-resistant functional films having UV-absorbing hard coating layers)

IT Polyesters, uses  
 RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
 (acrylic, graft, high-refractive index layers; scratch-resistant functional films having UV-absorbing hard coating layers)

IT Sulfonium compounds  
 RL: CAT (Catalyst use); USES (Uses)  
 (arene, triaryl, cationic photopolymn. **initiators**, hard coatings; scratch-resistant functional films having UV-absorbing hard coating layers)

- IT Polymerization catalysts  
(cationic, photochem.; scratch-resistant functional films having UV-absorbing hard coating layers)
- IT Antireflective films  
(multilayer; scratch-resistant functional films having UV-absorbing hard coating layers)
- IT Polymerization catalysts  
(photochem., radical; scratch-resistant functional films having UV-absorbing hard coating layers)
- IT Transparent films  
UV shields  
(scratch-resistant functional films having UV-absorbing hard coating layers)
- IT Polyesters, uses  
RL: TEM (Technical or engineered material use); USES (Uses)  
(substrate films; scratch-resistant functional films having UV-absorbing hard coating layers)
- IT Aromatic compounds  
RL: CAT (Catalyst use); USES (Uses)  
(sulfonium, triaryl, cationic photopolymn. **initiators**, hard coatings; scratch-resistant functional films having UV-absorbing hard coating layers)
- IT 75482-18-7, DTS 102 104558-95-4, Cyracure UVI 6990 106220-70-6, SP 150 125054-47-9, SP 170  
RL: CAT (Catalyst use); TEM (Technical or engineered material use); USES (Uses)  
(cationic photopolymn. **initiators**, hard coatings; scratch-resistant functional films having UV-absorbing hard coating layers)
- IT 25067-05-4P, Poly(glycidyl methacrylate) 36446-02-3P, Viscoat 295 homopolymer  
RL: IMF (Industrial manufacture); POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(hard coatings; scratch-resistant functional films having UV-absorbing hard coating layers)
- IT 600636-98-4P 600636-99-5P  
RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(high-refractive index layers; scratch-resistant functional films having UV-absorbing hard coating layers)
- IT **600637-00-1P 600637-01-2P**  
RL: **IMF (Industrial manufacture)**; PRP (Properties); TEM (Technical or engineered material use); **PREP (Preparation)**; USES (Uses)  
(low-refractive-index layers; scratch-resistant functional films having UV-absorbing hard coating layers)
- IT 947-19-3, Irgacure 184  
RL: CAT (Catalyst use); TEM (Technical or engineered material use); USES (Uses)  
(radically photopolymn. **initiators**, hard coatings; scratch-resistant functional films having UV-absorbing hard coating layers)
- IT 25038-59-9, Poly(ethylene terephthalate), uses  
RL: TEM (Technical or engineered material use); USES (Uses)  
(substrate films; scratch-resistant functional films having UV-absorbing hard coating layers)
- IT **600637-00-1P 600637-01-2P**



RL: **IMF (Industrial manufacture)**; PRP (Properties); TEM  
(Technical or engineered material use); **PREP (Preparation)**; USES  
(Uses)

(low-refractive-index layers; scratch-resistant functional films having  
UV-absorbing hard coating layers)

RN 600637-00-1 HCAPLUS

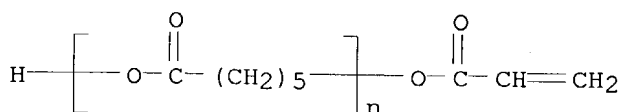
CN 2-Propenoic acid, 2,2-bis[[ (1-oxo-2-propenyl)oxy]methyl]-1,3-propanediyl  
ester, polymer with 2-[[ (heptadecafluorooctyl)sulfonyl]propylamino]ethyl  
2-propenoate and  $\alpha$ -hydro- $\omega$ -[(1-oxo-2-propenyl)oxy]poly[oxy(1-  
oxo-1,6-hexanediyl)], graft (9CI) (CA INDEX NAME)

CM 1

CRN 97387-29-6

CMF (C6 H10 O2)<sub>n</sub> C3 H4 O2

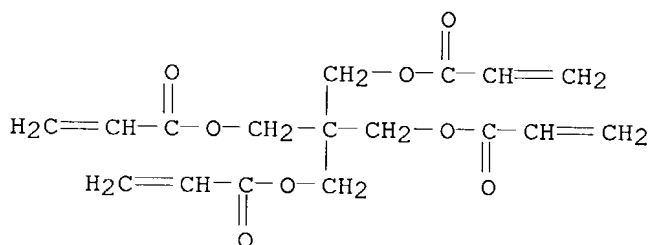
CCI PMS



CM 2

CRN 4986-89-4

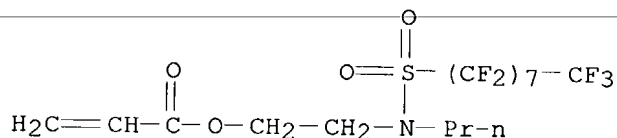
CMF C17 H20 O8



CM 3

CRN 2357-60-0

CMF C16 H14 F17 N O4 S



RN 600637-01-2 HCAPLUS

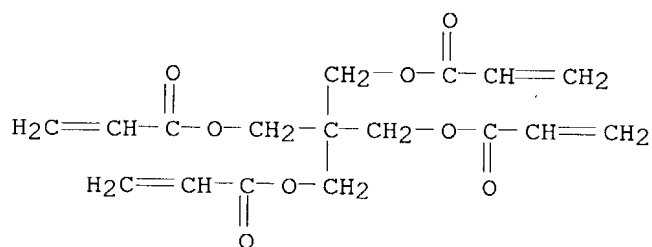
CN Hexanoic acid, 6-hydroxy-, polymer with 2,2-bis[[ (1-oxo-2-

propenyl)oxy)methyl]-1,3-propanediyl di-2-propenoate and  
2-[[ (heptadecafluorooctyl)sulfonyl]propylamino]ethyl 2-propenoate, graft  
(9CI) (CA INDEX NAME)

CM 1

CRN 4986-89-4

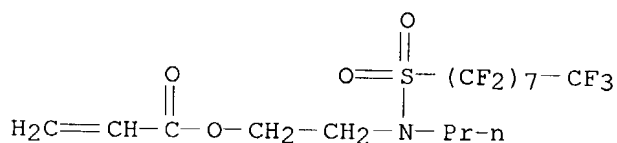
CMF C17 H20 O8



CM 2

CRN 2357-60-0

CMF C16 H14 F17 N O4 S



CM 3

CRN 1191-25-9

CMF C6 H12 O3

HO-(CH<sub>2</sub>)<sub>5</sub>-CO<sub>2</sub>H

L24 ANSWER 3 OF 27 HCAPLUS COPYRIGHT 2003 ACS on STN

AN 2003:696934 HCAPLUS

DN 139:231400

ED Entered STN: 05 Sep 2003

TI Photocurable fluoropolymer **compositions** having improved thermal stability and optical transmittance for optical waveguide

IN Kim, Mal Soon; Oh, Woo Jeong; Byun, Hyun Ho; Kim, Jung Wook; Han, Kwan Soo; Oh, Jung Hyun

PA Luvantix Co., Ltd., S. Korea

SO PCT Int. Appl., 26 pp.

CODEN: PIXXD2

DT Patent

LA English  
 IC ICM C08G018-42  
 CC 37-3 (Plastics Manufacture and Processing)  
 Section cross-reference(s): 74

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2003072625	A1	20030904	WO 2002-KR2381	20021218
	W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
PRAI	KR 2002-11002	A	20020228		

AB The **composition** comprises a fluorinated photocurable urethane oligomer R4R3O[CONHR2NHCOR1CF2O(CF2CF2O)1(CF2O)mCF2R1CONHR2NHCOR1nOR3R4 (R1 = -CH2O-, -CH2(OCH2CH2)mO-; R2 = aromatic or aliphatic C6-100 hydrocarbon group;

R3 = aromatic or aliphatic C2-10 hydrocarbon group; R4 = (meth)acrylate, epoxy group), a reactive monomer and a photocurable **initiator**. Thus, 40 parts Fluorolink E 10 (fluorinated polyether)-IPDI-2-hydroxyethyl methacrylate copolymer was mixed with SR 339 (photoreactive monomer) 25, 2-(perfluorooctyl)ethyl acrylate 25, Darocure 1173 (photo **initiator**) 4.5, 2,6-di-tert-butyl-4-methylphenol (BHT) 0.5 and Z 6030 5 parts, coated on glass substrate and **UV-cured** to give a specimen showing optical transmittance 93%, and good storage stability.

ST acrylic polyurethane fluoropolymer photocurability optical waveguide

IT Polyurethanes, preparation

RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(acrylic, fluorine-containing; photocurable fluoropolymer compns. having improved thermal stability and optical transmittance for optical waveguide)

IT Polyurethanes, preparation

RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(acrylic-epoxy, fluorine-containing; photocurable fluoropolymer compns. having improved thermal stability and optical transmittance for optical waveguide)

IT Fluoropolymers, preparation

RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(acrylic-epoxy-polyurethane-; photocurable fluoropolymer compns. having improved thermal stability and optical transmittance for optical waveguide)

IT Epoxy resins, preparation

RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(acrylic-polyurethane-, fluorine-containing; photocurable fluoropolymer compns. having improved thermal stability and optical transmittance for optical waveguide)

IT Fluoropolymers, preparation  
 RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
 (acrylic-polyurethane-; photocurable fluoropolymer compns. having improved thermal stability and optical transmittance for optical waveguide)

IT Optical waveguides  
 (photocurable fluoropolymer compns. having improved thermal stability and optical transmittance for optical waveguide)

IT Polymerization catalysts  
 (photopolymn.; photocurable fluoropolymer compns. having improved thermal stability and optical transmittance for optical waveguide)

IT 7473-98-5  
 RL: CAT (Catalyst use); USES (Uses)  
 (photocurable fluoropolymer compns. having improved thermal stability and optical transmittance for optical waveguide)

IT 591751-66-5P 591751-67-6P 591751-68-7P  
 591751-69-8P 592495-68-6P 592495-70-0P  
 RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
 (photocurable fluoropolymer compns. having improved thermal stability and optical transmittance for optical waveguide)

RE.CNT 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD  
 RE

- (1) Dsm N V; WO 9623828 A1 1996 HCAPLUS
- (2) Jsr Corp; JP 12-63766 A 2000
- (3) Nippon Kayaku Kabushiki Kaisha; US 6017603 A 2000 HCAPLUS
- (4) Showa Denko Kk; JP 10-237392 A 1998 HCAPLUS

IT 591751-66-5P 591751-67-6P 591751-68-7P  
 591751-69-8P 592495-68-6P 592495-70-0P  
 RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
 (photocurable fluoropolymer compns. having improved thermal stability and optical transmittance for optical waveguide)

RN 591751-66-5 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, 2-hydroxyethyl ester, polymer with Fluorolink E 10, 3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,10-heptadecafluorodecyl 2-propenoate, 5-isocyanato-1-(isocyanatomethyl)-1,3,3-trimethylcyclohexane and 2-phenoxyethyl 2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 352351-97-4

CMF Unspecified

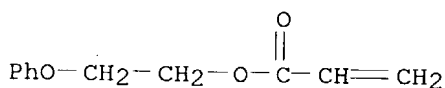
CCI MAN

\*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE \*\*\*

CM 2

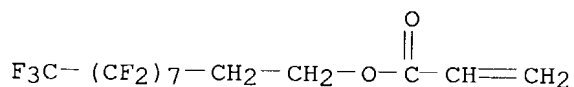
CRN 48145-04-6

CMF C11 H12 O3



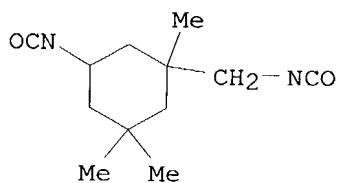
CM 3

CRN 27905-45-9  
CMF C13 H7 F17 O2



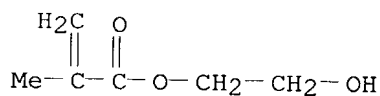
CM 4

CRN 4098-71-9  
CMF C12 H18 N2 O2



CM 5

CRN 868-77-9  
CMF C6 H10 O3



RN 591751-67-6 HCAPLUS  
CN 2-Propenoic acid, 2-methyl-, 2-hydroxyethyl ester, polymer with Fluorolink D, 3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,10-heptadecafluorodecyl 2-propenoate, 2-hydroxypropyl 2-propenoate, 5-isocyanato-1-(isocyanatomethyl)-1,3,3-trimethylcyclohexane and 2-phenoxyethyl 2-propenoate (9CI) (CA INDEX NAME)

CM 1

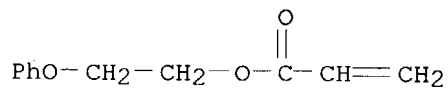
CRN 174394-49-1  
CMF Unspecified  
CCI PMS, MAN

\*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE \*\*\*

CM 2

CRN 48145-04-6

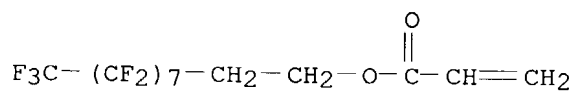
CMF C11 H12 O3



CM 3

CRN 27905-45-9

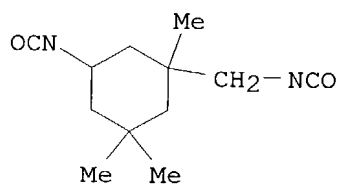
CMF C13 H7 F17 O2



CM 4

CRN 4098-71-9

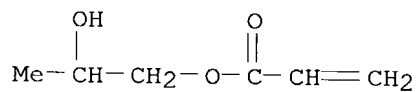
CMF C12 H18 N2 O2



CM 5

CRN 999-61-1

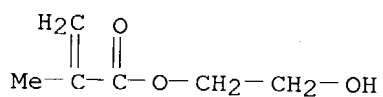
CMF C6 H10 O3



CM 6

CRN 868-77-9

CMF C6 H10 O3



RN 591751-68-7 HCAPLUS  
 CN 2-Propenoic acid, 2-methyl-, 2-hydroxyethyl ester, polymer with Fluorolink D, 3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,10-heptadecafluorodecyl 2-propenoate, 5-isocyanato-1-(isocyanatomethyl)-1,3,3-trimethylcyclohexane and 2-phenoxyethyl 2-propenoate (9CI) (CA INDEX NAME)

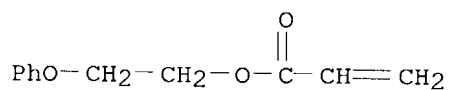
CM 1

CRN 174394-49-1  
 CMF Unspecified  
 CCI PMS, MAN

\*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE \*\*\*

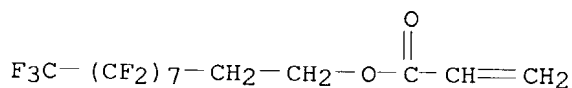
CM 2

CRN 48145-04-6  
 CMF C11 H12 O3



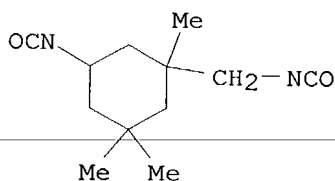
CM 3

CRN 27905-45-9  
 CMF C13 H7 F17 O2



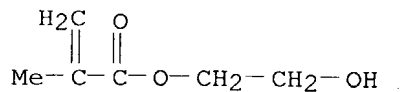
CM 4

CRN 4098-71-9  
 CMF C12 H18 N2 O2



CM 5

CRN 868-77-9  
 CMF C6 H10 O3



RN 591751-69-8 HCAPLUS  
 CN 2-Propenoic acid, 3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,10-heptadecafluorodecyl ester, polymer with bis(1-isocyanato-1-methylethyl)benzene, Fluorolink E 10, 2-hydroxypropyl 2-propenoate and 2-phenoxyethyl 2-propenoate (9CI) (CA INDEX NAME)

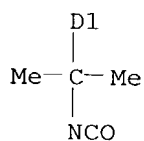
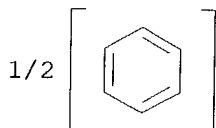
CM 1

CRN 352351-97-4  
 CMF Unspecified  
 CCI MAN

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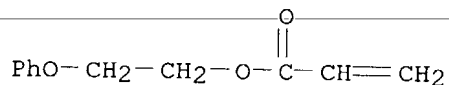
CM 2

CRN 58067-42-8  
 CMF C14 H16 N2 O2  
 CCI IDS



CM 3

CRN 48145-04-6  
 CMF C11 H12 O3

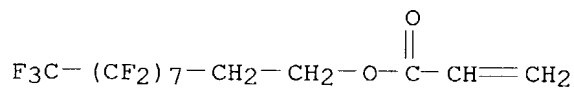


CM 4

CRN 27905-45-9



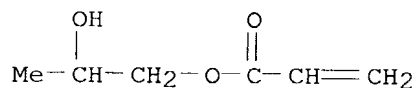
CMF C13 H7 F17 O2



CM 5

CRN 999-61-1

CMF C6 H10 O3



RN 592495-68-6 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, 2-hydroxyethyl ester, polymer with Fluorolink D 10H, 3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,10-heptadecafluorodecyl 2-propenoate, 2-hydroxypropyl 2-propenoate, 5-isocyanato-1-(isocyanatomethyl)-1,3,3-trimethylcyclohexane and 2-phenoxyethyl 2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 592493-91-9

CMF Unspecified

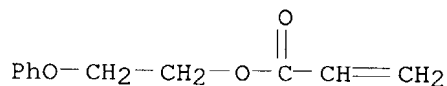
CCI PMS, MAN

\*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE \*\*\*

CM 2

CRN 48145-04-6

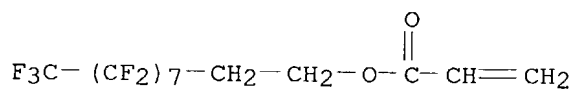
CMF C11 H12 O3



CM 3

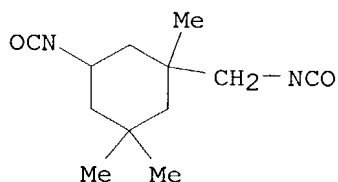
CRN 27905-45-9

CMF C13 H7 F17 O2



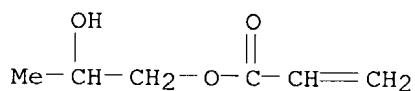
CM 4

CRN 4098-71-9  
CMF C12 H18 N2 O2



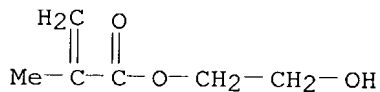
CM 5

CRN 999-61-1  
CMF C6 H10 O3



CM 6

CRN 868-77-9  
CMF C6 H10 O3



RN 592495-70-0 HCAPLUS  
CN 2-Propenoic acid, 2-methyl-, 2-hydroxyethyl ester, polymer with Fluorolink  
D 10H, 3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,10-heptadecafluorodecyl  
2-propenoate, 5-isocyanato-1-(isocyanatomethyl)-1,3,3-trimethylcyclohexane  
and 2-phenoxyethyl 2-propenoate (9CI) (CA INDEX NAME)

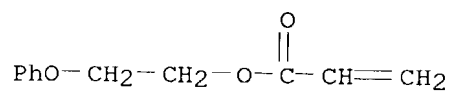
CM 1

CRN 592493-91-9  
CMF Unspecified  
CCI PMS, MAN

\*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE \*\*\*

CM 2

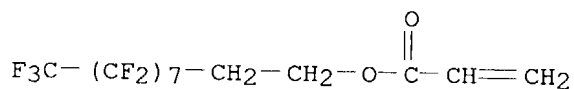
CRN 48145-04-6  
CMF C11 H12 O3



CM 3

CRN 27905-45-9

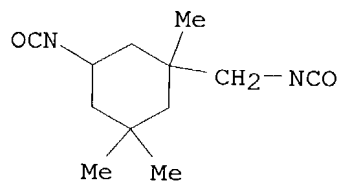
CMF C13 H7 F17 O2



CM 4

CRN 4098-71-9

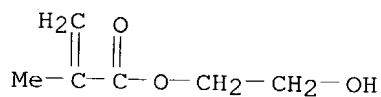
CMF C12 H18 N2 O2



CM 5

CRN 868-77-9

CMF C6 H10 O3



L24 ANSWER 4 OF 27 HCAPLUS COPYRIGHT 2003 ACS on STN

AN 2003:349330 HCAPLUS

DN 138:339415

ED Entered STN: 08 May 2003

TI Solvent-free resin **compositions** and their cured products for optical waveguides

IN Yokoshima, Minoru

PA Nippon Kayaku Co., Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 8 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

IC ICM C08F220-36  
ICS G02B006-12  
CC 38-3 (Plastics Fabrication and Uses)  
Section cross-reference(s): 37, 73  
FAN.CNT 1

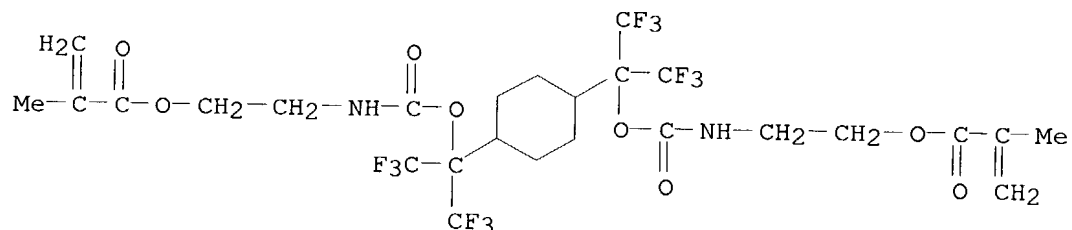
	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2003128731	A2	20030508	JP 2001-330618	20011029
PRAI	JP 2001-330618		20011029		
OS	MARPAT 138:339415				
AB	<p>The compns. comprise (A) urethane methacrylates as reaction products of R[C(CF<sub>3</sub>)<sub>2</sub>OH]<sub>2</sub> [R = C<sub>6</sub>H<sub>10</sub>, C<sub>6</sub>H<sub>4</sub>-p-OC<sub>6</sub>H<sub>4</sub>-p, 5-Cl-13 (fluoro)alkyl-(un)substituted 1,3-phenylene] with 2-isocyanatoethyl methacrylate (I) and (B) ethylenically unsatd. compns. Thus, a dimethacrylate compound (II) prepared from 1,4-bis(hexafluoro-2-hydroxy-2-propyl)cyclohexane and I was mixed with 1,6-hexanediol diacrylate and a photopolymer <b>initiator</b> to give a <b>composition</b>, which was applied on a substrate and <b>UV-cured</b> to give a layer. Then, a <b>composition</b> containing II, phenoxyethyl acrylate, and the <b>initiator</b> was applied on the above layer, masked, <b>UV-cured</b>, and developed to give an optical waveguide pattern, and the former curable <b>composition</b> was applied on the pattern and the lower cladding layer and <b>UV-cured</b> to give a multimode-channel optical waveguide.</p>				
ST	<p>urethane methacrylate polymer optical waveguide; bishexafluorohydroxypropylcyclohexane isocyanatoethyl methacrylate urethane dimethacrylate; hexanediol diacrylate urethane dimethacrylate polymer optical waveguide; phenoxyethyl acrylate urethane dimethacrylate polymer optical waveguide</p>				
IT	<p>Polyurethanes, uses RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses) (acrylic; solvent-free urethane methacrylate-ethylenically unsatd. compound compns. and their cured products for optical waveguides)</p>				
IT	<p>Optical waveguides (solvent-free urethane methacrylate-ethylenically unsatd. compound compns. and their cured products for optical waveguides)</p>				
IT	<p>517855-06-0P RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent) (solvent-free urethane methacrylate-ethylenically unsatd. compound compns. and their cured products for optical waveguides)</p>				
IT	<p>517855-07-1P 517855-08-2P RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses) (solvent-free urethane methacrylate-ethylenically unsatd. compound compns. and their cured products for optical waveguides)</p>				
IT	<p>30674-80-7, 2-Isocyanatoethyl methacrylate 122085-43-2 RL: RCT (Reactant); RACT (Reactant or reagent) (solvent-free urethane methacrylate-ethylenically unsatd. compound compns. and their cured products for optical waveguides)</p>				
IT	<p>517855-07-1P 517855-08-2P RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses) (solvent-free urethane methacrylate-ethylenically unsatd. compound compns. and their cured products for optical waveguides)</p>				
RN	<p>517855-07-1 HCAPLUS</p>				
CN	<p>2-Propenoic acid, 2-methyl-, 1,4-cyclohexanediylbis[[2,2,2-trifluoro-1-(trifluoromethyl)ethylidene]oxycarbonylimino-2,1-ethanediyl] ester,</p>				

polymer with 1,6-hexanediyl di-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 517855-06-0

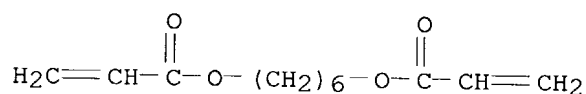
CMF C26 H30 F12 N2 O8



CM 2

CRN 13048-33-4

CMF C12 H18 O4



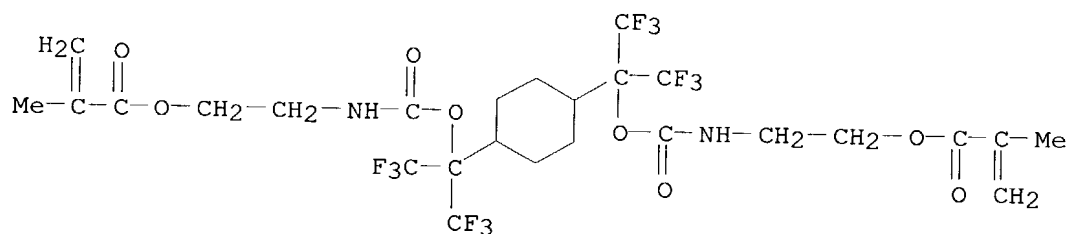
RN 517855-08-2 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, 1,4-cyclohexanediylbis[2,2,2-trifluoro-1-(trifluoromethyl)ethylidene]oxycarbonylimino-2,1-ethanediyl ester, polymer with 2-phenoxyethyl 2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 517855-06-0

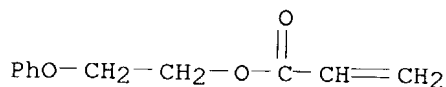
CMF C26 H30 F12 N2 O8



CM 2

CRN 48145-04-6

CMF C11 H12 O3



L24 ANSWER 5 OF 27 HCAPLUS COPYRIGHT 2003 ACS on STN

AN 2003:68661 HCAPLUS

DN 138:123973

ED Entered STN: 29 Jan 2003

TI **UV-curable compositions** forming transparent coatings with low surface tackiness and good adhesion to substrates

IN Miwa, Yoshiyuki

PA Ube Industries, Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 11 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

IC ICM C08G059-62

ICS C08G065-18; C08L071-02; C09D004-02; C09D005-00; C09D133-14; C09D163-00; C09D167-04; C09D171-00; C09D171-02; C08L033-14

CC 42-7 (Coatings, Inks, and Related Products)

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2003026775	A2	20030129	JP 2001-218041	20010718
PRAI	JP 2001-218041		20010718		

AB Title compns. contain oxetane ring-containing nonacrylic compds., (polymers of) fluoroalkyl (meth)acrylates, oxirane ring-containing nonacrylic compds., polyalcs., and photopolymn. **initiators**. Thus, bis[(3-ethyl-3-oxetanyl)methyl] ether 100, Viscoat 3FM (fluoroalkyl methacrylate) 16.5, and Cyclomer M 100 (oxirane ring-containing methacrylate) 16.5 parts were reacted in the presence of AIBN to give a solution containing a polymer with Mn 28,000, 12 parts of the solution was combined with UVR 6128 (oxirane ring-containing nonacrylic compound) 100, Placel 303 (polyalc.) 50, and UVI 6990 (**initiator**) 8.1 parts, cast on a glass plate, and UV-irradiated. The formed coating was tack free and showed good adhesion to the substrate.

ST acrylic **UV curable** coating tackiness free; polyalc oxetane oxirane fluoroalkyl methacrylate coating; transparent coating polyester polyol oxetane oxirane

IT Coating materials

(**UV-curable; UV-curable** compns.

containing oxetanes, fluoroalkyl (meth)acrylate (polymers), oxiranes, and polyalcs. for tack-free coatings and good adhesion to substrates)

IT Polyethers, uses

RL: TEM (Technical or engineered material use); USES (Uses)

(acrylic-epoxy, fluorine-containing; **UV-curable** compns.

containing oxetanes, fluoroalkyl (meth)acrylate (polymers), oxiranes, and polyalcs. for tack-free coatings and good adhesion to substrates)

IT Polyoxyalkylenes, uses

RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

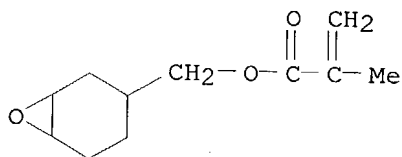
(acrylic-epoxy-polyester-, fluorine-containing; **UV-**

**curable** compns. containing oxetanes, fluoroalkyl (meth)acrylate (polymers), oxiranes, and polyalcs. for tack-free coatings and good adhesion to substrates)

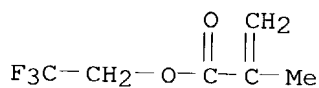
IT Fluoropolymers, uses

- RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(acrylic-epoxy-polyester-polyoxyalkylene-; **UV-curable** compns. containing oxetanes, fluoroalkyl (meth)acrylate (polymers), oxiranes, and polyalcs. for tack-free coatings and good adhesion to substrates)
- IT Fluoropolymers, uses  
RL: TEM (Technical or engineered material use); USES (Uses)  
(acrylic-epoxy-polyether-; **UV-curable** compns. containing oxetanes, fluoroalkyl (meth)acrylate (polymers), oxiranes, and polyalcs. for tack-free coatings and good adhesion to substrates)
- IT Polyesters, uses  
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(acrylic-epoxy-polyoxyalkylene-, fluorine-containing; **UV-curable** compns. containing oxetanes, fluoroalkyl (meth)acrylate (polymers), oxiranes, and polyalcs. for tack-free coatings and good adhesion to substrates)
- IT Epoxy resins, uses  
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(acrylic-polyester-polyoxyalkylene-, fluorine-containing; **UV-curable** compns. containing oxetanes, fluoroalkyl (meth)acrylate (polymers), oxiranes, and polyalcs. for tack-free coatings and good adhesion to substrates)
- IT Epoxy resins, uses  
RL: TEM (Technical or engineered material use); USES (Uses)  
(acrylic-polyether-, fluorine-containing; **UV-curable** compns. containing oxetanes, fluoroalkyl (meth)acrylate (polymers), oxiranes, and polyalcs. for tack-free coatings and good adhesion to substrates)
- IT Transparent materials  
(coatings; **UV-curable** compns. containing oxetanes, fluoroalkyl (meth)acrylate (polymers), oxiranes, and polyalcs. for tack-free coatings and good adhesion to substrates)
- IT Coating materials  
(transparent; **UV-curable** compns. containing oxetanes, fluoroalkyl (meth)acrylate (polymers), oxiranes, and polyalcs. for tack-free coatings and good adhesion to substrates)
- IT 18934-00-4P, Bis[(3-ethyl-3-oxetanyl)methyl] ether 128703-08-2P, Cyclomer M 100 homopolymer **489395-74-6P 489395-76-8P 489395-78-0P**  
RL: IMF (Industrial manufacture); RCT (Reactant); TEM (Technical or engineered material use); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)  
(**UV-curable** compns. containing oxetanes, fluoroalkyl (meth)acrylate (polymers), oxiranes, and polyalcs. for tack-free coatings and good adhesion to substrates)
- IT **489395-75-7P 489395-77-9P 489395-79-1P**  
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(**UV-curable** compns. containing oxetanes, fluoroalkyl (meth)acrylate (polymers), oxiranes, and polyalcs. for tack-free coatings and good adhesion to substrates)
- IT 3047-32-3, 3-Ethyl-3-hydroxymethyloxetane  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(etherification of; **UV-curable** compns. containing oxetanes, fluoroalkyl (meth)acrylate (polymers), oxiranes, and

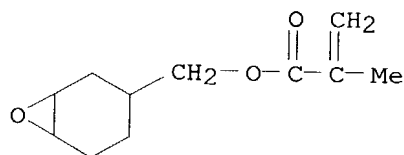
polyalcs. for tack-free coatings and good adhesion to substrates)  
 IT **489395-74-6P 489395-76-8P 489395-78-0P**  
 RL: **IMF (Industrial manufacture)**; RCT (Reactant); TEM (Technical or engineered material use); **PREP (Preparation)**; RACT (Reactant or reagent); USES (Uses)  
 (UV-curable compns. containing oxetanes, fluoroalkyl (meth)acrylate (polymers), oxiranes, and polyalcs. for tack-free coatings and good adhesion to substrates)  
 RN 489395-74-6 HCAPLUS  
 CN 2-Propenoic acid, 2-methyl-, 7-oxabicyclo[4.1.0]hept-3-ylmethyl ester, polymer with 2,2,2-trifluoroethyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)  
 CM 1  
 CRN 82428-30-6  
 CMF C11 H16 O3



CM 2  
 CRN 352-87-4  
 CMF C6 H7 F3 O2



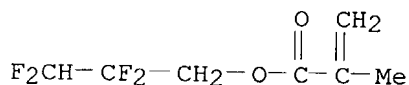
RN 489395-76-8 HCAPLUS  
 CN 2-Propenoic acid, 2-methyl-, 7-oxabicyclo[4.1.0]hept-3-ylmethyl ester, polymer with 2,2,3,3-tetrafluoropropyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)  
 CM 1  
 CRN 82428-30-6  
 CMF C11 H16 O3





CM 2

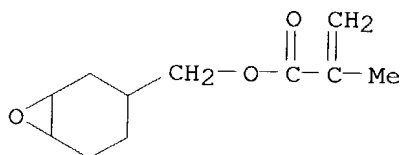
CRN 45102-52-1  
CMF C7 H8 F4 O2



RN 489395-78-0 HCAPLUS  
CN 2-Propenoic acid, 2-methyl-, 2,2,3,3,4,4,5,5-octafluoropentyl ester, polymer with 7-oxabicyclo[4.1.0]hept-3-ylmethyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

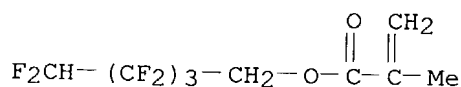
CM 1

CRN 82428-30-6  
CMF C11 H16 O3



CM 2

CRN 355-93-1  
CMF C9 H8 F8 O2



IT 489395-75-7P 489395-77-9P 489395-79-1P

RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(UV-curable compns. containing oxetanes, fluoroalkyl (meth)acrylate (polymers), oxiranes, and polyalcs. for tack-free coatings and good adhesion to substrates)

RN 489395-75-7 HCAPLUS

CN Hexanedioic acid, bis(7-oxabicyclo[4.1.0]hept-3-yl) ester, polymer with 7-oxabicyclo[4.1.0]hept-3-ylmethyl 2-methyl-2-propenoate, 3,3'-[oxybis(methylene)]bis[3-ethyloxetane], Placcel 303 and 2,2,2-trifluoroethyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

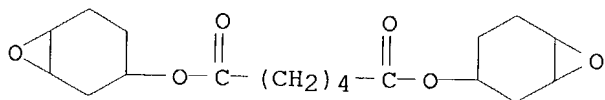
CRN 89750-32-3

CMF Unspecified  
CCI PMS, MAN

\*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE \*\*\*

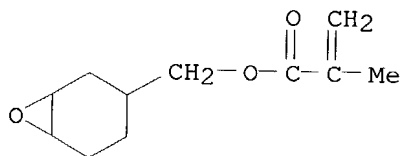
CM 2

CRN 83996-66-1  
CMF C18 H26 O6



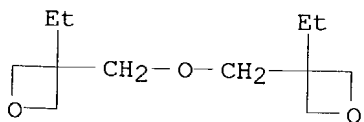
CM 3

CRN 82428-30-6  
CMF C11 H16 O3



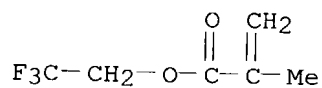
CM 4

CRN 18934-00-4  
CMF C12 H22 O3



CM 5

CRN 352-87-4  
CMF C6 H7 F3 O2



RN 489395-77-9 HCAPLUS

CN Hexanedioic acid, bis(7-oxabicyclo[4.1.0]hept-3-yl) ester, polymer with  
7-oxabicyclo[4.1.0]hept-3-ylmethyl 2-methyl-2-propenoate,  
3,3'-[oxybis(methylene)]bis[3-ethyloxetane], Placel 303 and  
2,2,3,3-tetrafluoropropyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

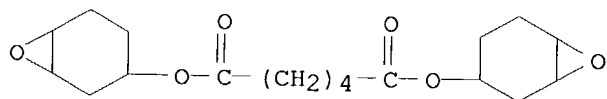
CM 1

CRN 89750-32-3  
CMF Unspecified  
CCI PMS, MAN

\*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE \*\*\*

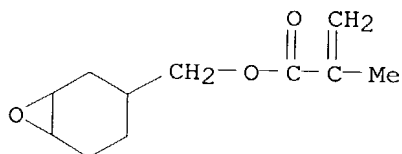
CM 2

CRN 83996-66-1  
CMF C18 H26 O6



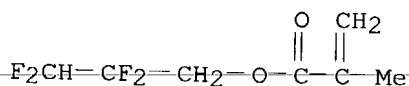
CM 3

CRN 82428-30-6  
CMF C11 H16 O3



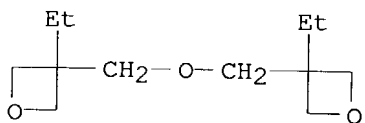
CM 4

CRN 45102-52-1  
CMF C7 H8 F4 O2



CM 5

CRN 18934-00-4  
CMF C12 H22 O3



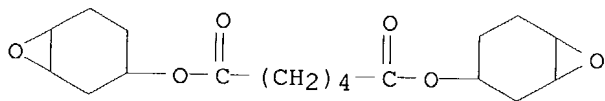
RN 489395-79-1 HCAPLUS

CN Hexanedioic acid, bis(7-oxabicyclo[4.1.0]hept-3-yl) ester, polymer with  $\alpha$ -hydro- $\omega$ -hydroxypoly[oxy(1-oxo-1,6-hexanediyl)] ester with 2-ethyl-2-(hydroxymethyl)-1,3-propanediol (3:1), 2,2,3,3,4,4,5,5-octafluoropentyl 2-methyl-2-propenoate, 7-oxabicyclo[4.1.0]hept-3-ylmethyl 2-methyl-2-propenoate and 3,3'-[oxybis(methylene)]bis[3-ethyloxetane] (9CI) (CA INDEX NAME)

CM 1

CRN 83996-66-1

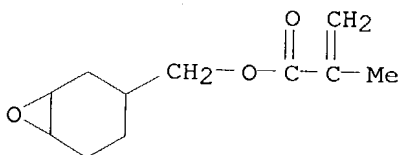
CMF C18 H26 O6



CM 2

CRN 82428-30-6

CMF C11 H16 O3



CM 3

CRN 54735-63-6

CMF (C6 H10 O2)<sub>n</sub> (C6 H10 O2)<sub>n</sub> (C6 H10 O2)<sub>n</sub> C6 H14 O3

CCI PMS



PI	JP 2002275220	A2	20020925	JP 2001-77342	20010319
PRAI	JP 2001-77342		20010319		

AB The compns. contain (A) 2-trifluoromethylacrylate  $\text{CH}_2\text{:CCF}_3\text{CO}_2\text{X}$  [ $\text{X} = \text{C}_m\text{F}_{2m+1}\text{CH}_2\text{CH}_2$ ,  $(\text{CF}_3)_2\text{CF}(\text{CF}_2)_n\text{CH}_2\text{CH}_2$ ,  $\text{H}(\text{CF}_2\text{CF}_2)_a\text{CH}_2\text{CH}_2$ ;  $m = 1-12$ ,  $n = 0-10$ ,  $a = 1-6$ ] and (B) F-containing urethane (meth)acrylate compds. obtained by reaction of F-containing (meth)acrylates  $\text{R}_1\text{CH}_2\text{CH}(\text{OH})\text{CH}_2\text{OCOCR}_2\text{:CH}_2$  and/or  $\text{R}_1\text{CH}_2\text{CH}(\text{CH}_2\text{OH})\text{OCOCR}_2\text{:CH}_2$  [ $\text{R}_1 = \text{C}_k\text{F}_{2k+1}(\text{CH}_2)_h$ ,  $\text{C}_k\text{F}_{2k+1}(\text{CH}_2)_h\text{O}$ ,  $(\text{CF}_3)_2\text{CF}(\text{CF}_2)_l(\text{CH}_2)_h$ ,  $(\text{CF}_3)_2\text{CF}(\text{CF}_2)_l(\text{CH}_2)_h\text{O}$ ,  $\text{H}(\text{CF}_2\text{CF}_2)_i(\text{CH}_2)_h$ ,  $\text{H}(\text{CF}_2\text{CF}_2)_i(\text{CH}_2)_h\text{O}$ ;  $k = 1-12$ ,  $l = 0-10$ ,  $h = 0-2$ ,  $i = 1-4$ ;  $\text{R} = \text{H}$ ,  $\text{Me}$ ] with diisocyanates. Thus, a transparent **composition** containing 2-(perfluoro-n-octyl)ethanol 2-trifluoromethylacrylate ester 40.0, 3-perfluoro-n-octyl-1,2-epoxypropane acrylate ester adduct with 2, (2 or 4), 4-trimethylhexamethylene diisocyanate 60.0, and 1-hydroxycyclohexyl Ph ketone 1.0 part showed  $n_{25} 1.3707$  and viscosity 1310 mPa-s ( $25^\circ$ ) and its **UV-cured** product shoed  $n_{25} 1.3839$ , Young's modulus 217 MPa, elongation at rupture 15.3%, and high transparency and soilproofing properties.

ST actinic ray curable urethane acrylate polymer; transparent soilproofing coating urethane methacrylate; optical fiber cladding urethane acrylate **UV curable**; fluorine acrylic polyurethane **UV curable** coating

IT Coating materials  
(**UV-curable**; actinic ray-**curable** acrylic polymer compns. for optical fiber claddings and coatings with low refractive index)

IT Polyurethanes, uses  
RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(acrylic, fluorine-containing; actinic ray-curable acrylic polymer compns. for optical fiber claddings and coatings with low refractive index)

IT Coating materials  
(antisoiling; actinic ray-curable acrylic polymer compns. for optical fiber claddings and coatings with low refractive index)

IT Optical fibers  
(claddings; actinic ray-curable acrylic polymer compns. for optical fiber claddings and coatings with low refractive index)

IT Transparent materials  
(coatings; actinic ray-curable acrylic polymer compns. for optical fiber claddings and coatings with low refractive index)

IT Polyurethanes, uses  
RL: IMF (Industrial manufacture); RCT (Reactant); TEM (Technical or engineered material use); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)  
(fluorine-containing, acrylate-terminated; actinic ray-curable acrylic polymer compns. for optical fiber claddings and coatings with low refractive index)

IT Fluoropolymers, uses  
RL: IMF (Industrial manufacture); RCT (Reactant); TEM (Technical or engineered material use); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)  
(polyurethane-, acrylate-terminated; actinic ray-curable acrylic polymer compns. for optical fiber claddings and coatings with low refractive index)

IT Coating materials  
(transparent; actinic ray-curable acrylic polymer compns. for optical fiber claddings and coatings with low refractive index)

IT **460991-06-4P 460991-07-5P**

RL: **IMF (Industrial manufacture)**; PRP (Properties); TEM  
(Technical or engineered material use); **PREP (Preparation)**; USES  
(Uses)

(actinic ray-curable acrylic polymer compns. for optical fiber  
claddings and coatings with low refractive index)

IT 83680-43-7DP, reaction products with perfluorooctylepoxypropane acrylate  
127397-09-5P 147987-73-3P 440114-74-9P

RL: IMF (Industrial manufacture); RCT (Reactant); TEM (Technical or  
engineered material use); PREP (Preparation); RACT (Reactant or reagent);  
USES (Uses)

(actinic ray-curable acrylic polymer compns. for optical fiber  
claddings and coatings with low refractive index)

IT 678-39-7 32052-51-0 38565-53-6

RL: RCT (Reactant); RACT (Reactant or reagent)

(actinic ray-curable acrylic polymer compns. for optical fiber  
claddings and coatings with low refractive index)

IT 947-19-3, 1-Hydroxycyclohexyl phenyl ketone

RL: CAT (Catalyst use); USES (Uses)

(photopolymn. **initiator**; actinic ray-curable acrylic polymer  
compns. for optical fiber claddings and coatings with low refractive  
index)

IT **460991-06-4P 460991-07-5P**

RL: **IMF (Industrial manufacture)**; PRP (Properties); TEM  
(Technical or engineered material use); **PREP (Preparation)**; USES  
(Uses)

(actinic ray-curable acrylic polymer compns. for optical fiber  
claddings and coatings with low refractive index)

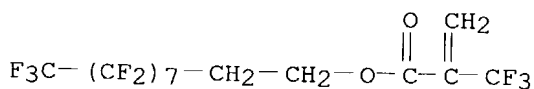
RN 460991-06-4 HCAPLUS

CN 2-Propenoic acid, 2-(trifluoromethyl)-, 3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10-  
hexadecafluorodecyl ester, polymer with 4,4,5,5,6,6,7,7,8,8,9,9,10,10,11,1  
1,11-heptafluoro-1,2-undecanediol [2,2,4(or 2,4,4)-trimethyl-1,6-  
hexanediyl]bis[carbamate] di-2-propenoate (ester) (9CI) (CA INDEX NAME)

CM 1

CRN 147987-73-3

CMF C14 H6 F20 O2



CM 2

CRN 440114-74-9

CMF C39 H36 F34 N2 O8

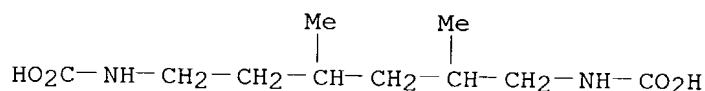
CCI IDS

CM 3

CRN 225237-43-4

CMF C11 H22 N2 O4

CCI IDS

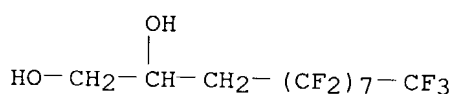


D1-Me

CM 4

CRN 94159-84-9

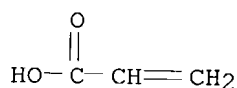
CMF C11 H7 F17 O2



CM 5

CRN 79-10-7

CMF C3 H4 O2



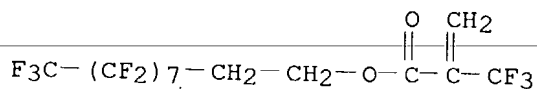
RN 460991-07-5 HCAPLUS

CN 2-Propenoic acid, 2-(trifluoromethyl)-, 3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10-hexadecafluorodecyl ester, polymer with 1,4-butanediol, 1,6-diisocyanato-2,2,4(or 2,4,4)-trimethylhexane, 4,4,5,5,6,6,7,7,8,8,9,9,10,10,11,11,11-heptadecafluoro-1,2-undecanediol mono(2-propenoate), 4,4,5,5,6,6,7,7,8,8,9,9,10,10,11,11,11-heptadecafluoro-1,2-undecanediol [2,2,4(or 2,4,4)-trimethyl-1,6-hexanediyl]bis[carbamate] di-2-propenoate (ester) (9CI) (CA INDEX NAME)

CM 1

CRN 147987-73-3

CMF C14 H6 F20 O2



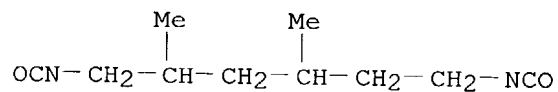
CM 2

CRN 32052-51-0

CMF C11 H18 N2 O2



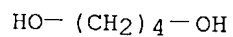
CCI IDS



D1-Me

CM 3

CRN 110-63-4  
CMF C4 H10 O2

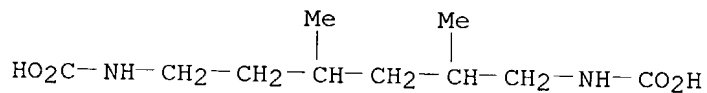


CM 4

CRN 440114-74-9  
CMF C39 H36 F34 N2 O8  
CCI IDS

CM 5

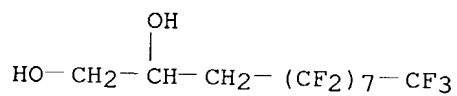
CRN 225237-43-4  
CMF C11 H22 N2 O4  
CCI IDS



D1-Me

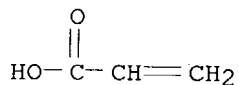
CM 6

CRN 94159-84-9  
CMF C11 H7 F17 O2



CM 7

CRN 79-10-7  
CMF C3 H4 O2

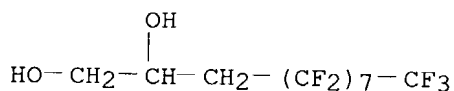


CM 8

CRN 127397-09-5  
CMF C14 H9 F17 O3  
CCI IDS

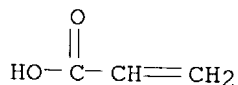
CM 9

CRN 94159-84-9  
CMF C11 H7 F17 O2



CM 10

CRN 79-10-7  
CMF C3 H4 O2



L24 ANSWER 7 OF 27 HCAPLUS COPYRIGHT 2003 ACS on STN  
AN 2002:236929 HCAPLUS  
DN 136:279863  
ED Entered STN: 28 Mar 2002  
TI **UV curable resin composition** containing  
fluorine copolymer for antireflection film and the preparation of the  
fluoropolymer  
IN Watanabe, Fusaka; Nishikawa, Akira  
PA JSR Ltd., Japan  
SO Jpn. Kokai Tokkyo Koho, 16 pp.  
CODEN: JKXXAF  
DT Patent  
LA Japanese  
IC ICM C08F214-18  
ICS C08F002-44; C08F002-46; C08F216-14; C08F291-04; C09D004-06;  
C09D005-00; G02B001-11

CC 35-4 (Chemistry of Synthetic High Polymers)  
Section cross-reference(s): 42

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2002088122	A2	20020327	JP 2000-277815	20000913
PRAI	JP 2000-277815		20000913		

AB The patent relates to polymer **composition** containing fluoropolymer for antireflection film. The **composition** contains fluoropolymers prepared from monomers selected from one or more of (1)-(CF<sub>2</sub>CFR<sub>1</sub>)-, (2)-CR<sub>5</sub>R<sub>7</sub>-CR<sub>6</sub>(X-(R<sub>8</sub>-O)<sub>n</sub>-R<sub>9</sub>)-, and (3)-CR<sub>10</sub>R<sub>12</sub>-CR<sub>11</sub>(X-(R<sub>13</sub>-O)<sub>n</sub>-R<sub>14</sub>)- in presence of an azo-containing polysiloxane -SiR<sub>15</sub>R<sub>16</sub>O- wherein R<sub>5</sub>-R<sub>7</sub>, R<sub>10</sub>-R<sub>12</sub> is hydrogen or C<sub>1</sub>-C<sub>6</sub> alkyl, R<sub>8</sub> C<sub>2</sub>-C<sub>6</sub> alkylene group, R<sub>9</sub> hydrogen and C<sub>1</sub>-C<sub>30</sub> alkyl group or aryl basis, as for R<sub>13</sub> C<sub>6</sub>-C<sub>30</sub> chain-like alkylene basis, R<sub>14</sub> hydrogen or hydroxyl group, X oxygen or -COO- or -OCO-, n integer of ≥3. The copolymers have fluorine content >30 weight % and is formulated with multi-functional (meta) acrylate compds. and radiation polymerization **initiator**.

ST fluoropolymer light curable resin **compn** antireflective film  
IT Antireflective films

(**UV curable resin composition** containing fluorine copolymer for antireflection film and the preparation of the fluoropolymer)  
IT Fluoropolymers, preparation

RL: IMF (Industrial manufacture); POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(**UV curable resin composition** containing fluorine copolymer for antireflection film and the preparation of the fluoropolymer)  
IT Coating materials

(**UV-curable; UV curable resin composition** containing fluorine copolymer for antireflection film and the preparation of the fluoropolymer)

IT **405508-32-9P**, Dodecyl vinyl ether-ethyl vinyl ether-hexafluoropropylene-N-vinyl 2-pyrrolidinone copolymer **405508-33-0P**, Ethyl vinyl ether-hexafluoropropylene-methoxytriethylene glycol vinyl ether-perfluoropropyl vinyl ether copolymer

RL: **IMF (Industrial manufacture)**; POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); **PREP (Preparation)**; USES (Uses)

(**UV curable resin composition** containing fluorine copolymer for antireflection film and the preparation of the fluoropolymer)

IT 36446-02-3P, Trimethylolpropane triacrylate homopolymer **132771-99-4P**, Heptadecafluorodecyl acrylate-pentaerythritol triacrylate copolymer **405508-34-1P**, Dipentaerythritol hexaacrylate-heptadecafluorodecyl acrylate-pentaerythritol triacrylate copolymer

RL: **IMF (Industrial manufacture)**; PRP (Properties); TEM (Technical or engineered material use); **PREP (Preparation)**; USES (Uses)

(**UV curable resin composition** containing fluorine copolymer for antireflection film and the preparation of the fluoropolymer)

T 25190-89-0, KYNAR ADS 158947-07-0, VPS-1001  
RL: POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); USES (Uses)

(**UV curable resin composition** containing fluorine copolymer for antireflection film and the preparation of the fluoropolymer)

T **405508-32-9P**, Dodecyl vinyl ether-ethyl vinyl ether-hexafluoropropylene-N-vinyl 2-pyrrolidinone copolymer **405508-33-0P**

, Ethyl vinyl ether-hexafluoropropylene-methoxytriethylene glycol vinyl ether-perfluoropropyl vinyl ether copolymer

RL: **IMF (Industrial manufacture)**; POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); **PREP (Preparation)**; USES (Uses)

(**UV curable resin composition** containing fluorine copolymer for antireflection film and the preparation of the fluoropolymer)

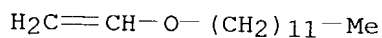
RN 405508-32-9 HCAPLUS

CN 2-Pyrrolidinone, 1-ethenyl-, polymer with 1-(ethenyloxy)dodecane, ethoxyethene and 1,1,2,3,3,3-hexafluoro-1-propene (9CI) (CA INDEX NAME)

CM 1

CRN 765-14-0

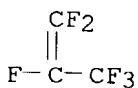
CMF C14 H28 O



CM 2

CRN 116-15-4

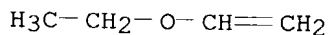
CMF C3 F6



CM 3

CRN 109-92-2

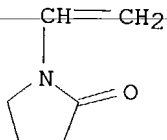
CMF C4 H8 O



CM 4

CRN 88-12-0

CMF C6 H9 N O



RN 405508-33-0 HCAPLUS

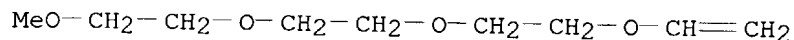
CN 2,5,8,11-Tetraoxatridec-12-ene, polymer with ethoxyethene,

1,1,1,2,2,3,3-heptafluoro-3-[(trifluoroethenyl)oxy]propane and  
1,1,2,3,3,3-hexafluoro-1-propene (9CI) (CA INDEX NAME)

CM 1

CRN 26256-87-1

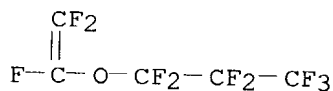
CMF C9 H18 O4



CM 2

CRN 1623-05-8

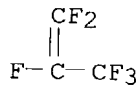
CMF C5 F10 O



CM 3

CRN 116-15-4

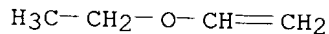
CMF C3 F6



CM 4

CRN 109-92-2

CMF C4 H8 O



IT 132771-99-4P, Heptadecafluorodecyl acrylate-pentaerythritol  
triacylate copolymer 405508-34-1P, Dipentaerythritol  
hexaacrylate-heptadecafluorodecyl acrylate-pentaerythritol triacylate  
copolymer

RL: IMF (Industrial manufacture); PRP (Properties); TEM  
(Technical or engineered material use); PREP (Preparation); USES  
(Uses)

(UV curable resin composition containing fluorine  
copolymer for antireflection film and the preparation of the fluoropolymer)

RN 132771-99-4 HCAPLUS

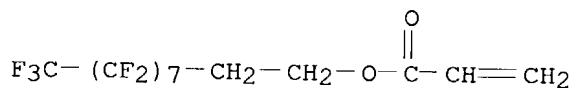
CN 2-Propenoic acid, 2-(hydroxymethyl)-2-[[[(1-oxo-2-propenyl)oxy]methyl]-1,3-  
propanediyl ester, polymer with 3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,10-

heptadecafluorodecyl 2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 27905-45-9

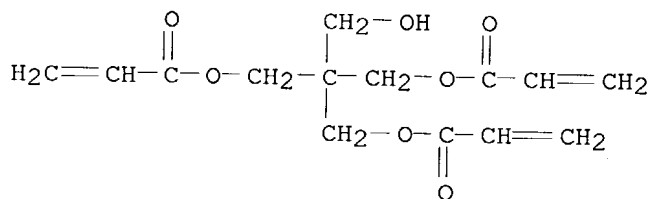
CMF C13 H7 F17 O2



CM 2

CRN 3524-68-3

CMF C14 H18 O7



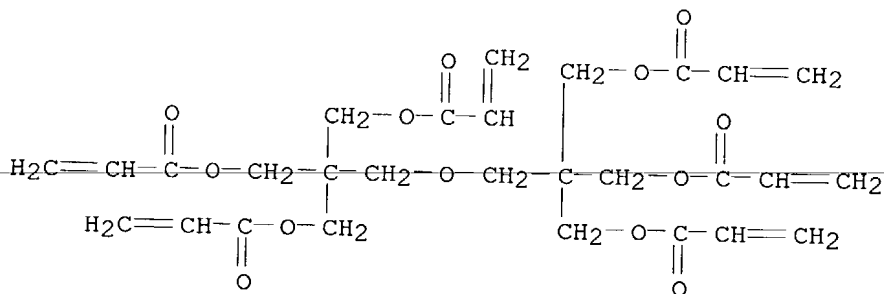
RN 405508-34-1 HCAPLUS

CN 2-Propenoic acid, 2-(hydroxymethyl)-2-[[[(1-oxo-2-propenyl)oxy]methyl]-1,3-propanediyl ester, polymer with 3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,10-heptadecafluorodecyl 2-propenoate and 2-[[[3-[(1-oxo-2-propenyl)oxy]-2,2-bis[[[(1-oxo-2-propenyl)oxy]methyl]propoxy]methyl]-2-[[[(1-oxo-2-propenyl)oxy]methyl]-1,3-propanediyl di-2-propenoate (9CI) (CA INDEX NAME)

CM 1

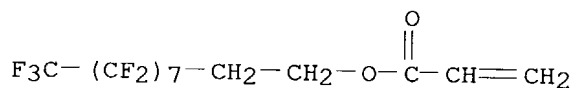
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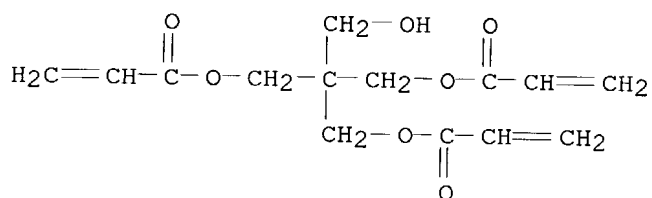
CM 2

CRN 27905-45-9  
CMF C13 H7 F17 O2



CM 3

CRN 3524-68-3  
CMF C14 H18 O7



L24 ANSWER 8 OF 27 HCAPLUS COPYRIGHT 2003 ACS on STN  
AN 2002:129274 HCAPLUS  
DN 136:185461  
ED Entered STN: 19 Feb 2002  
TI Fluoroorganopolysiloxane-based film-forming **compositions**  
IN Matsumura, Kazuyuki; Yamatani, Masaaki; Asai, Mitsuo; Sato, Kazuharu  
PA Shin-Etsu Chemical Industry Co., Ltd., Japan  
SO Jpn. Kokai Tokkyo Koho, 19 pp.  
CODEN: JKXXAF  
DT Patent  
LA Japanese  
IC ICM C09D183-08  
ICS B32B027-00; C08F290-06; C08G077-16; C08G077-20; C08G077-24;  
C08G077-26; C08G077-28; C09D005-16; C09D143-04; C09D183-02;  
C09D183-04  
CC 42-10 (Coatings, Inks, and Related Products)  
Section cross-reference(s): 73

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2002053806	A2	20020219	JP 2000-237502	20000804
PRAI	JP 2000-237502		20000804		
OS	MARPAT 136:185461				

AB Title compns., with good adhesion, antireflection, transparency, and weather resistance, contain condensates prepared from silanes and fluoroalkyl-containing silane hydrolyzates. A polycarbonate plate was coated with a **composition** containing  $\gamma$ -acryloxypropyltrimethoxysilane-C8F17(CH2)2Si(CH3)(OH)2 condensate and an **initiator** and **UV-cured** to form a film with pencil hardness H, water repellency 101°, refractive index 1.38, reflection degree 2.0%, and good adhesion, transparency, and soil, scratch, and weather resistance.

- ST fluoropolysiloxane hard coating transparency antireflection adhesion; soil weather water resistance fluoropolysiloxane coating
- IT Polysiloxanes, uses  
 RL: IMF (Industrial manufacture); POF (Polymer in formulation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
 (acrylic, fluoroalkyl group-containing; fluoropolysiloxane hard coatings with plastic adhesion and soil and water and weather resistance for antireflective articles)
- IT Polysiloxanes, uses  
 RL: IMF (Industrial manufacture); POF (Polymer in formulation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
 (acrylic, high refractive bottom coat; fluoropolysiloxane hard coatings with plastic adhesion and soil and water and weather resistance for antireflective articles)
- IT Fluoropolymers, uses  
 RL: IMF (Industrial manufacture); POF (Polymer in formulation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
 (acrylic-polysiloxane-, fluoroalkyl group-containing; fluoropolysiloxane hard coatings with plastic adhesion and soil and water and weather resistance for antireflective articles)
- IT Fluoropolymers, uses  
 RL: IMF (Industrial manufacture); POF (Polymer in formulation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
 (fluoroalkyl polysiloxane-; fluoropolysiloxane hard coatings with plastic adhesion and soil and water and weather resistance for antireflective articles)
- IT Polysiloxanes, uses  
 RL: IMF (Industrial manufacture); POF (Polymer in formulation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
 (fluoroalkyl; fluoropolysiloxane hard coatings with plastic adhesion and soil and water and weather resistance for antireflective articles)
- IT Antireflective films  
 (fluoropolysiloxane hard coatings with plastic adhesion and soil and water and weather resistance for antireflective articles)
- IT Oxides (inorganic), uses  
 RL: MOA (Modifier or additive use); USES (Uses)  
 (sols; fluoropolysiloxane hard coatings with plastic adhesion and soil and water and weather resistance for antireflective articles)
- IT Polycarbonates, miscellaneous  
 Polyesters, miscellaneous  
 RL: MSC (Miscellaneous)  
 (substrates; fluoropolysiloxane hard coatings with plastic adhesion and soil and water and weather resistance for antireflective articles)
- IT **399039-09-9P**,  $\gamma$ -Acryloxypropyltrimethoxysilane-(2-perfluorooctylethyl)methylsilanediol copolymer **399039-10-2P**,  $\gamma$ -Acryloxypropyltrimethoxysilane-(2-perfluorooctylethyl)methylsilane diol-trimethylolpropane triacrylate-tetraethoxysilane copolymer **399039-11-3P**,  $\gamma$ -Acryloxypropyltrimethoxysilane-(2-perfluorooctylethyl)methylsilanediol-2-(perfluorooctyl)ethyl acrylate-silica copolymer  
 RL: **IMF (Industrial manufacture)**; POF (Polymer in formulation); TEM (Technical or engineered material use); **PREP (Preparation)**; USES (Uses)  
 (crosslinked; fluoropolysiloxane hard coatings with plastic adhesion and soil and water and weather resistance for antireflective articles)
- IT 1760-24-3DP, N-(2-Aminoethyl)-3-aminopropyltrimethoxysilane, reaction products with epoxysiloxanes, polymers with alkoxysilyl-containing acrylic resins 2897-60-1DP,  $\gamma$ -Glycidoxypropylmethyldiethoxysilane,



reaction products with aminoalkoxysilanes, polymers with  
alkoxysilyl-containing acrylic resins 124479-37-4P, Ethyl acrylate-ethylene  
glycol dimethacrylate-glycidyl methacrylate-3-(trimethoxysilyl)propyl  
methacrylate-methyl methacrylate-vinyl acetate copolymer

**399039-12-4P 399039-13-5P, γ-**

Acryloxypropyltrimethoxysilane-(2-perfluorooctylethyl)methylsilanediol-2-  
(perfluorooctyl)ethyl acrylate-trimethylolpropane triacrylate-  
tetraethoxysilane copolymer **399039-14-6P, (2-**  
Perfluorooctylethyl)methylsilanediol-methyltrimethoxysilane-  
tetraethoxysilane-silica copolymer

RL: **IMF (Industrial manufacture);** POF (Polymer in formulation);

TEM (Technical or engineered material use); **PREP (Preparation);**

USES (Uses)

(fluoropolysiloxane hard coatings with plastic adhesion and soil and  
water and weather resistance for antireflective articles)

IT 124479-37-4DP, Ethyl acrylate-ethylene glycol dimethacrylate-glycidyl  
methacrylate-3-(trimethoxysilyl)propyl methacrylate-methyl  
methacrylate-vinyl acetate copolymer, polymers with amidoalkoxysilanes  
from aminoalkoxysilanes and epoxyalkoxysilanes 124479-38-5DP, Ethyl  
acrylate-ethylene glycol dimethacrylate-glycidyl methacrylate-methyl  
methacrylate-vinyl acetate-vinyltrimethoxysilane copolymer, polymers with  
amidoalkoxysilanes from aminoalkoxysilanes and epoxyalkoxysilanes  
399039-04-4P, Ethyl acrylate-ethylene glycol dimethacrylate-glycidyl  
methacrylate-3-(trimethoxysilyl)propyl methacrylate-methyl  
methacrylate-vinyl acetate-ureidopropyltriethoxysilane copolymer

RL: IMF (Industrial manufacture); POF (Polymer in formulation); TEM

(Technical or engineered material use); PREP (Preparation); USES (Uses)

(high refractive bottom coat; fluoropolysiloxane hard coatings with  
plastic adhesion and soil and water and weather resistance for  
antireflective articles)

IT 9011-14-7, PMMA

RL: MOA (Modifier or additive use); USES (Uses)

(in bottom coat; fluoropolysiloxane hard coatings with plastic adhesion  
and soil and water and weather resistance for antireflective articles)

IT 13463-67-7, Titania, uses

RL: MOA (Modifier or additive use); USES (Uses)

(sols; fluoropolysiloxane hard coatings with plastic adhesion and soil  
and water and weather resistance for antireflective articles)

IT 25038-59-9, PET polymer, miscellaneous

RL: MSC (Miscellaneous)

(substrates; fluoropolysiloxane hard coatings with plastic adhesion and  
soil and water and weather resistance for antireflective articles)

IT **399039-09-9P, γ-Acryloxypropyltrimethoxysilane-(2-**  
perfluorooctylethyl)methylsilanediol copolymer **399039-10-2P,**  
γ-Acryloxypropyltrimethoxysilane-(2-perfluorooctylethyl)methylsilane  
diol-trimethylolpropane triacrylate-tetraethoxysilane copolymer

**399039-11-3P, γ-Acryloxypropyltrimethoxysilane-(2-**  
perfluorooctylethyl)methylsilanediol-2-(perfluorooctyl)ethyl  
acrylate-silica copolymer

RL: **IMF (Industrial manufacture);** POF (Polymer in formulation);

TEM (Technical or engineered material use); **PREP (Preparation);**

USES (Uses)

(crosslinked; fluoropolysiloxane hard coatings with plastic adhesion  
and soil and water and weather resistance for antireflective articles)

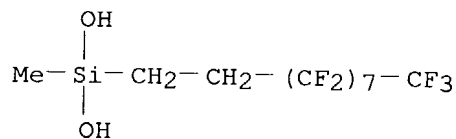
RN 399039-09-9 HCAPLUS

CN 2-Propenoic acid, 3-(trimethoxysilyl)propyl ester, polymer with  
(3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,10-heptadecafluorodecyl)methylsilanediol  
(9CI) (CA INDEX NAME)

CM 1

CRN 160447-73-4

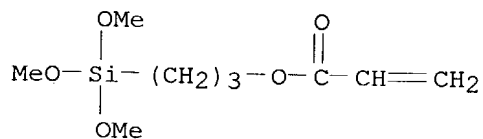
CMF C11 H9 F17 O2 Si



CM 2

CRN 4369-14-6

CMF C9 H18 O5 Si



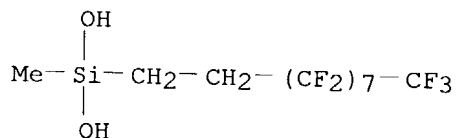
RN 399039-10-2 HCAPLUS

CN 2-Propenoic acid, 2-ethyl-2-[[[(1-oxo-2-propenyl)oxy]methyl]-1,3-propanediyl ester, polymer with (3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,10-heptafluorodecyl)methylsilanediol, silicic acid (H<sub>4</sub>SiO<sub>4</sub>) tetraethyl ester and 3-(trimethoxysilyl)propyl 2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 160447-73-4

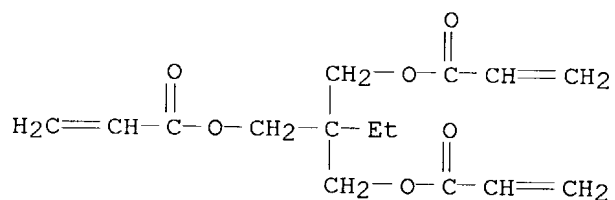
CMF C11 H9 F17 O2 Si



CM 2

CRN 15625-89-5

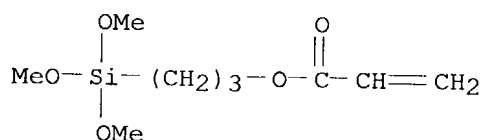
CMF C15 H20 O6



CM 3

CRN 4369-14-6

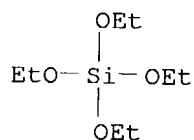
CMF C9 H18 O5 Si



CM 4

CRN 78-10-4

CMF C8 H20 O4 Si



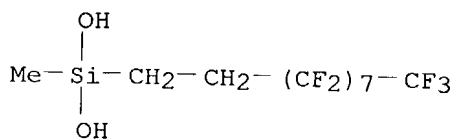
RN 399039-11-3 HCAPLUS

CN 2-Propenoic acid, 3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,10-heptafluorodecyl ester, polymer with (3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,10-heptafluorodecyl)methylsilanediol, silica and 3-(trimethoxysilyl)propyl 2-propenoate (9CI) (CA INDEX NAME)

CM 1

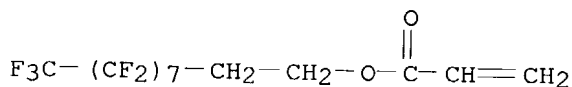
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CMF C11 H9 F17 O2 Si



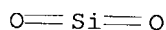
CM 2

CRN 27905-45-9  
CMF C13 H7 F17 O2



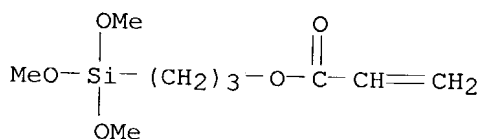
CM 3

CRN 7631-86-9  
CMF O2 Si



CM 4

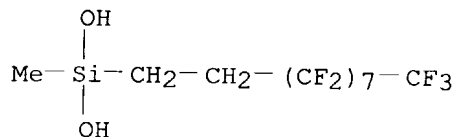
CRN 4369-14-6  
CMF C9 H18 O5 Si



IT **399039-12-4P 399039-13-5P, γ-**  
Acryloxypropyltrimethoxysilane-(2-perfluorooctylethyl)methylsilanediol-2-(perfluorooctyl)ethyl acrylate-trimethylolpropane triacrylate-tetraethoxysilane copolymer **399039-14-6P**, (2-Perfluorooctylethyl)methylsilanediol-methyltrimethoxysilane-tetraethoxysilane-silica copolymer  
RL: **IMF (Industrial manufacture)**; POF (Polymer in formulation);  
TEM (Technical or engineered material use); **PREP (Preparation)**;  
USES (Uses)  
(fluoropolysiloxane hard coatings with plastic adhesion and soil and water and weather resistance for antireflective articles)  
RN 399039-12-4 HCAPLUS  
CN 2-Propenoic acid, 2-ethyl-2-[[[(1-oxo-2-propenyl)oxy]methyl]-1,3-propanediyl ester, polymer with (3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,10-heptafluorodecyl)methylsilanediol and 3-(trimethoxysilyl)propyl 2-propenoate (9CI) (CA INDEX NAME)

CM 1

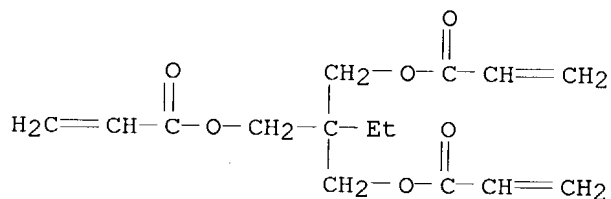
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CMF C11 H9 F17 O2 Si



CM 2

CRN 15625-89-5

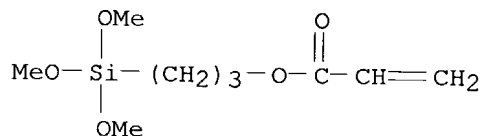
CMF C15 H20 O6



CM 3

CRN 4369-14-6

CMF C9 H18 O5 Si



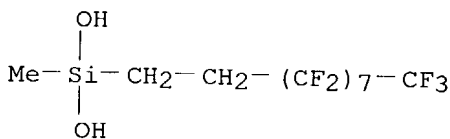
RN 399039-13-5 HCAPLUS

CN 2-Propenoic acid, 2-ethyl-2-[[[(1-oxo-2-propenyl)oxy]methyl]-1,3-propanediyl ester, polymer with (3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,10-heptadecafluorodecyl)methylsilanediol, 3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,10-heptadecafluorodecyl 2-propenoate, silicic acid (H4SiO4) tetraethyl ester and 3-(trimethoxysilyl)propyl 2-propenoate (9CI) (CA INDEX NAME)

CM 1

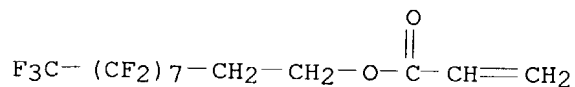
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CMF C11 H9 F17 O2 Si



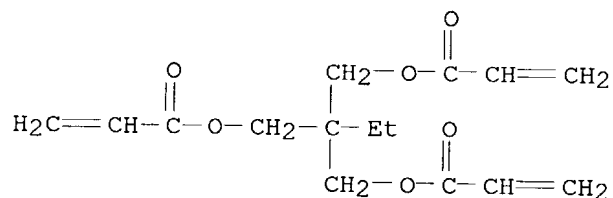
CM 2

CRN 27905-45-9  
CMF C13 H7 F17 O2



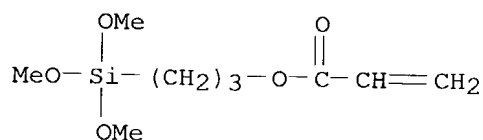
CM 3

CRN 15625-89-5  
CMF C15 H20 O6



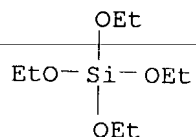
CM 4

CRN 4369-14-6  
CMF C9 H18 O5 Si



CM 5

CRN 78-10-4  
CMF C8 H20 O4 Si



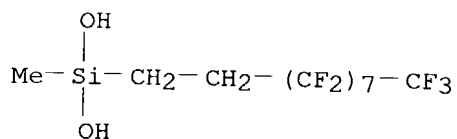
RN	399039-14-6	HCAPLUS
CN	Silicic acid (H4SiO4), tetraethyl ester, polymer with (3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,10-heptafluorodecyl)methylsilanedio	

1, silica and trimethoxymethylsilane (9CI) (CA INDEX NAME)

CM 1

CRN 160447-73-4

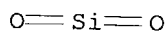
CMF C11 H9 F17 O2 Si



CM 2

CRN 7631-86-9

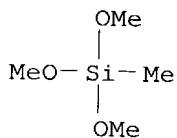
CMF O2 Si



CM 3

CRN 1185-55-3

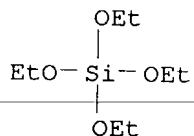
CMF C4 H12 O3 Si



CM 4

CRN 78-10-4

CMF C8 H20 O4 Si



L24 ANSWER 9 OF 27 HCAPLUS COPYRIGHT 2003 ACS on STN  
AN 2002:129273 HCAPLUS  
DN 136:185460  
ED Entered STN: 19 Feb 2002

KATHLEEN FULLER EIC 1700/PARKER LAW 308-4290

TI Fluoroorganopolysiloxane-based film-forming **compositions**  
 IN Matsumura, Kazuyuki; Yamatani, Masaaki; Asai, Mitsuo; Sato, Kazuharu  
 PA Shin-Etsu Chemical Industry Co., Ltd., Japan  
 SO Jpn. Kokai Tokkyo Koho, 25 pp.  
 CODEN: JKXXAF

DT Patent

LA Japanese

IC ICM C09D183-08

ICS C08G077-24; C08G077-26; C08G077-28; C08G077-46; C09D005-00;  
 C09D005-16

CC 42-10 (Coatings, Inks, and Related Products)

Section cross-reference(s): 73

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2002053805	A2	20020219	JP 2000-237490	20000804
PRAI	JP 2000-237490		20000804		

AB Title compns., with good adhesion, antireflection, transparency, and weather resistance, contain title polysiloxanes prepared by hydrolytic polycondensation of 100 parts blends of  $Rf(CH_2)aX(CH_2)bSiR_1c(OR_2)3-c$  ( $Rf = CnF2n+1$  or  $CF_3CF_2CF_2O[C(CF_3)CF_2]mC(CF_3)F$  with  $m \geq 1$  and  $n = 1-20$ ;  $R_1, R_2 = C1-4$  alkyl;  $X = CH_2, CH_2O, NR_3, COO, CONR_3, S, SO_2, SO_2NR_3, R_3 = H$  or  $C1-8$  alkyl;  $a = 0-3,; b = 1-3; c = 0-1$ ) and  $R_4dSi(OR_5)4-d$  ( $R_4 = C1-10$  alkyl;  $R_5 = C1-10$  alkyl, alkenyl, aryl, alkoxyalkyl, acyl;  $d = 0-3$ ) in the presence of 200-2,000 parts water or in fluoro solvents. A polycarbonate plate was coated with a **composition** containing  $\gamma$ -acryloxypropyltrimethoxysilane-C8F17(CH<sub>2</sub>)<sub>2</sub>Si(OMe)<sub>3</sub> hydrolyzate 100, an **initiator** 5, and trimethylolpropane triacrylate 10 parts and **UV-cured** to form a film with pencil hardness H, water repellency 103°, refractive index 1.38, reflection degree 2.0%, and good adhesion, transparency, and soil, scratch, and weather resistance.

ST fluoropolysiloxane hard coating transparency antireflection adhesion; soil weather water resistance fluoropolysiloxane coating

IT Polysiloxanes, uses  
 RL: IMF (Industrial manufacture); POF (Polymer in formulation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses) (acrylic, fluoroalkyl group-containing; fluoropolysiloxane hard coatings with plastic adhesion and soil and water and weather resistance for antireflective articles)

IT Polysiloxanes, uses  
 RL: IMF (Industrial manufacture); POF (Polymer in formulation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses) (acrylic, high refractive bottom coat; fluoropolysiloxane hard coatings with plastic adhesion and soil and water and weather resistance for antireflective articles)

IT Fluoropolymers, uses  
 RL: IMF (Industrial manufacture); POF (Polymer in formulation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses) (acrylic-polysiloxane-, fluoroalkyl group-containing; fluoropolysiloxane hard coatings with plastic adhesion and soil and water and weather resistance for antireflective articles)

IT Silsesquioxanes  
 RL: IMF (Industrial manufacture); POF (Polymer in formulation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses) (fluorine-containing; fluoropolysiloxane hard coatings with plastic adhesion and soil and water and weather resistance for antireflective articles)

IT Hydrocarbons, uses



- RL: NUU (Other use, unclassified); USES (Uses)  
(fluoro, hydrolytic polycondensation in; fluoropolysiloxane hard coatings with plastic adhesion and soil and water and weather resistance for antireflective articles)
- IT Antireflective films  
(fluoropolysiloxane hard coatings with plastic adhesion and soil and water and weather resistance for antireflective articles)
- IT Fluoropolymers, uses  
RL: IMF (Industrial manufacture); POF (Polymer in formulation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(silsesquioxane-; fluoropolysiloxane hard coatings with plastic adhesion and soil and water and weather resistance for antireflective articles)
- IT Oxides (inorganic), uses  
RL: MOA (Modifier or additive use); USES (Uses)  
(sols; fluoropolysiloxane hard coatings with plastic adhesion and soil and water and weather resistance for antireflective articles)
- IT Polycarbonates, miscellaneous  
Polyesters, miscellaneous  
RL: MSC (Miscellaneous)  
(substrates; fluoropolysiloxane hard coatings with plastic adhesion and soil and water and weather resistance for antireflective articles)
- IT **399039-00-0P**,  $\gamma$ -Acryloxypropyltrimethoxysilane-2-perfluorooctylethyltrimethoxysilane-trimethylolpropane triacrylate copolymer **399039-01-1P**, 3-Acryloxypropyltrimethoxysilane-(3-acryloxypropyl)methyldimethoxysilane-2-(perfluorooctyl)ethyl acrylate-2-perfluorooctylethyltrimethoxysilane-trimethoxy(3,3,3-trifluoropropyl)silane-trimethylolpropane triacrylate-tetraethoxysilane copolymer **399039-02-2P**,  $\gamma$ -Acryloxypropyltrimethoxysilane-3-(acryloxypropyl)methyldimethoxysilane-2-perfluorooctylethyltrimethoxysilane-trimethoxy(3,3,3-trifluoropropyl)silane-trimethylolpropane triacrylate-silica-tetraethoxysilane copolymer  
RL: **IMF (Industrial manufacture)**; POF (Polymer in formulation); TEM (Technical or engineered material use); **PREP (Preparation)**; USES (Uses)  
(crosslinked; fluoropolysiloxane hard coatings with plastic adhesion and soil and water and weather resistance for antireflective articles)
- IT 1760-24-3DP, N-(2-Aminoethyl)-3-aminopropyltrimethoxysilane, reaction product with epoxyalkoxysilane, polymers with alkoxysilyl-containing acrylic resins 2897-60-1DP,  $\gamma$ -Glycidoxypropylmethyldiethoxysilane, reaction product with aminoalkoxysilane, polymers with alkoxysilyl-containing acrylic resins **157287-40-6P**, Trimethoxy(3,3,3-Trifluoropropyl)silane homopolymer **159412-13-2P**, 2-Perfluorooctylethyltrimethoxysilane homopolymer 161045-59-6P **162023-57-6P 395084-01-2P**, 2-Perfluorooctylethyltrimethoxysilane-trimethoxy(3,3,3-trifluoropropyl)silane-tetraethoxysilane copolymer **399039-03-3P**, 2-Perfluorooctylethyltrimethoxysilane-trimethoxy(3,3,3-trifluoropropyl)silane-methyltrimethoxysilane copolymer  
RL: **IMF (Industrial manufacture)**; POF (Polymer in formulation); TEM (Technical or engineered material use); **PREP (Preparation)**; USES (Uses)  
(fluoropolysiloxane hard coatings with plastic adhesion and soil and water and weather resistance for antireflective articles)
- IT 124479-37-4DP, Ethyl acrylate-ethylene glycol dimethacrylate-glycidyl methacrylate-3-(trimethoxysilyl)propyl methacrylate-methyl methacrylate-vinyl acetate copolymer, polymers with amidoalkoxysilane from amonoalkoxysilane and epoxyalkoxysilane 124479-37-4P, Ethyl

acrylate-ethylene glycol dimethacrylate-glycidyl methacrylate-3-(trimethoxysilyl)propyl methacrylate-methyl methacrylate-vinyl acetate copolymer 124479-38-5DP, Ethyl acrylate-ethylene glycol dimethacrylate-glycidyl methacrylate-methyl methacrylate-vinyl acetate-vinyltrimethoxysilane copolymer, polymers with amidoalkoxysilane from amonoalkoxysilane and epoxyalkoxysilane 399039-04-4P, Ethyl acrylate-ethylene glycol dimethacrylate-glycidyl methacrylate-3-(trimethoxysilyl)propyl methacrylate-methyl methacrylate-vinyl acetate-ureidopropyltriethoxysilane copolymer

RL: IMF (Industrial manufacture); POF (Polymer in formulation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses) (high refractive bottom coat; fluoropolysiloxane hard coatings with plastic adhesion and soil and water and weather resistance for antireflective articles)

IT 335-36-4, Perfluoro-2-butyl-tetrahydrofuran 376-18-1 402-31-3, 1,3-Bis(Trifluoromethyl)benzene

RL: NUU (Other use, unclassified); USES (Uses) (hydrolytic polycondensation in; fluoropolysiloxane hard coatings with plastic adhesion and soil and water and weather resistance for antireflective articles)

IT 9011-14-7, PMMA

RL: MOA (Modifier or additive use); USES (Uses) (in bottom coat; fluoropolysiloxane hard coatings with plastic adhesion and soil and water and weather resistance for antireflective articles)

IT 13463-67-7, Titania, uses

RL: MOA (Modifier or additive use); USES (Uses) (sols; fluoropolysiloxane hard coatings with plastic adhesion and soil and water and weather resistance for antireflective articles)

IT 25038-59-9, PET, miscellaneous

RL: MSC (Miscellaneous) (substrates; fluoropolysiloxane hard coatings with plastic adhesion and soil and water and weather resistance for antireflective articles)

IT 399039-00-0P,  $\gamma$ -Acryloxypropyltrimethoxysilane-2-perfluorooctylethyltrimethoxysilane-trimethylolpropane triacrylate copolymer 399039-01-1P, 3-Acryloxypropyltrimethoxysilane-(3-acryloxypropyl)methyldimethoxysilane-2-(perfluorooctyl)ethyl acrylate-2-perfluorooctylethyltrimethoxysilane-trimethoxy(3,3,3-trifluoropropyl)silane-trimethylolpropane triacrylate-tetraethoxysilane copolymer 399039-02-2P,  $\gamma$ -Acryloxypropyltrimethoxysilane-3-(acryloxypropyl)methyldimethoxysilane-2-perfluorooctylethyltrimethoxysilane-trimethoxy(3,3,3-trifluoropropyl)silane-trimethylolpropane triacrylate-silica-tetraethoxysilane copolymer

RL: IMF (Industrial manufacture); POF (Polymer in formulation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses) (crosslinked; fluoropolysiloxane hard coatings with plastic adhesion and soil and water and weather resistance for antireflective articles)

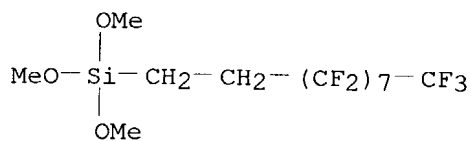
RN 399039-00-0 HCAPLUS

CN 2-Propenoic acid, 2-ethyl-2-[(1-oxo-2-propenyl)oxy]methyl]-1,3-propanediyl ester, polymer with (3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10-heptafluorodecyl)trimethoxysilane and 3-(trimethoxysilyl)propyl 2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 83048-65-1

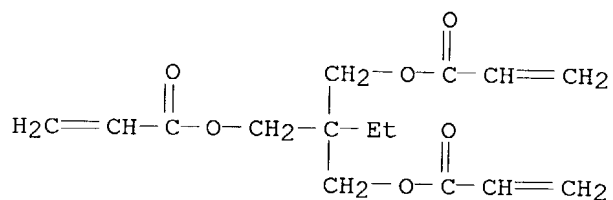
CMF C13 H13 F17 O3 Si



CM 2

CRN 15625-89-5

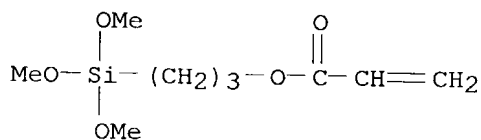
CMF C15 H20 O6



CM 3

CRN 4369-14-6

CMF C9 H18 O5 Si



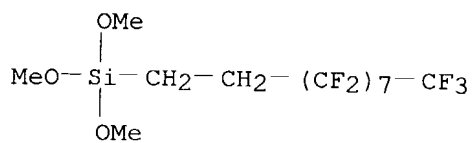
RN 399039-01-1 HCAPLUS

CN 2-Propenoic acid, 2-ethyl-2-[[[(1-oxo-2-propenyl)oxy]methyl]-1,3-propanediyl ester, polymer with 3-(dimethoxymethylsilyl)propyl 2-propenoate, 3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,10-heptadecafluorodecyl 2-propenoate, (3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,10-heptadecafluorodecyl)trimethoxysilane, silicic acid (H4SiO4) tetraethyl ester, 3-(trimethoxysilyl)propyl 2-propenoate and trimethoxy(3,3,3-trifluoropropyl)silane (9CI) (CA INDEX NAME)

CM 1

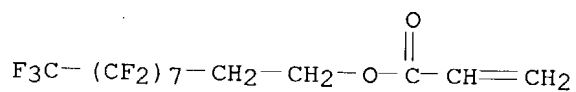
CRN 83048-65-1

CMF C13 H13 F17 O3 Si



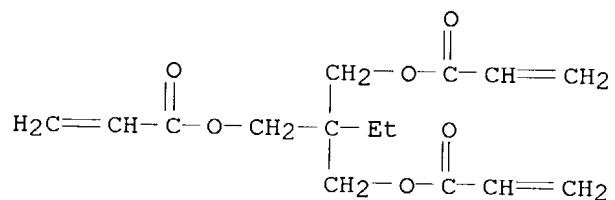
CM 2

CRN 27905-45-9  
CMF C13 H7 F17 O2



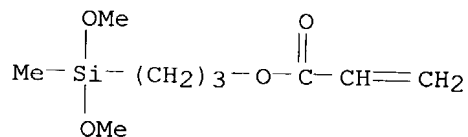
CM 3

CRN 15625-89-5  
CMF C15 H20 O6



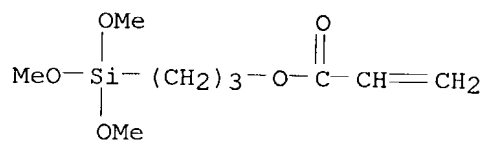
CM 4

CRN 13732-00-8  
CMF C9 H18 O4 Si



CM 5

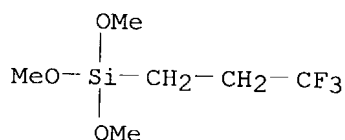
CRN 4369-14-6  
CMF C9 H18 O5 Si



CM 6

CRN 429-60-7

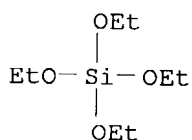
CMF C6 H13 F3 O3 Si



CM 7

CRN 78-10-4

CMF C8 H20 O4 Si



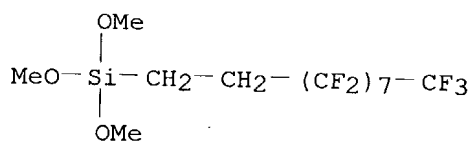
RN 399039-02-2 HCAPLUS

CN 2-Propenoic acid, 2-ethyl-2-[[[(1-oxo-2-propenyl)oxy]methyl]-1,3-propanediyl ester, polymer with 3-(dimethoxymethylsilyl)propyl 2-propenoate, (3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,10-heptafluorodecyl)trimethoxysilane, silica, silicic acid (H<sub>4</sub>SiO<sub>4</sub>) tetraethyl ester, 3-(trimethoxysilyl)propyl 2-propenoate and trimethoxy(3,3,3-trifluoropropyl)silane (9CI) (CA INDEX NAME)

CM 1

CRN 83048-65-1

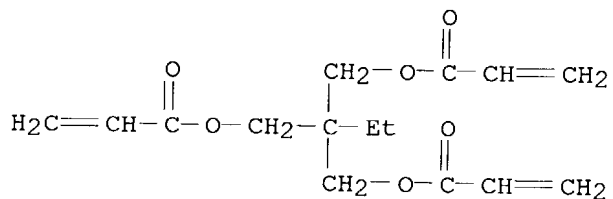
CMF C13 H13 F17 O3 Si



CM 2

CRN 15625-89-5

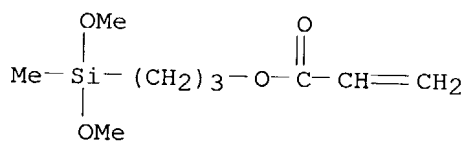
CMF C15 H20 O6



CM 3

CRN 13732-00-8

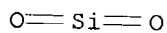
CMF C9 H18 O4 Si



CM 4

CRN 7631-86-9

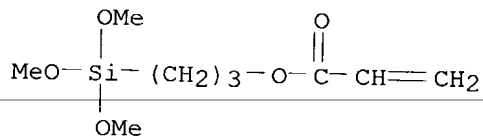
CMF O2 Si



CM 5

CRN 4369-14-6

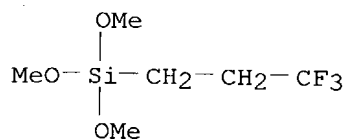
CMF C9 H18 O5 Si



CM 6

CRN 429-60-7

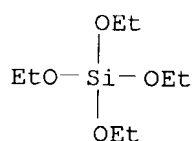
CMF C6 H13 F3 O3 Si



CM 7

CRN 78-10-4

CMF C8 H20 O4 Si

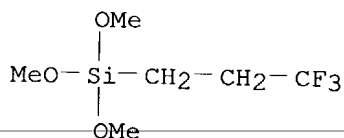


IT 157287-40-6P, Trimethoxy(3,3,3-Trifluoropropyl)silane homopolymer  
 159412-13-2P, 2-Perfluorooctylethyltrimethoxysilane homopolymer  
 162023-57-6P 395084-01-2P, 2-  
 Perfluorooctylethyltrimethoxysilane-trimethoxy(3,3,3-  
 trifluoropropyl)silane-tetraethoxysilane copolymer 399039-03-3P,  
 2-Perfluorooctylethyltrimethoxysilane-trimethoxy(3,3,3-  
 trifluoropropyl)silane-methyltrimethoxysilane copolymer  
 RL: IMF (Industrial manufacture); POF (Polymer in formulation);  
 TEM (Technical or engineered material use); PREP (Preparation);  
 USES (Uses)  
 (fluoropolysiloxane hard coatings with plastic adhesion and soil and  
 water and weather resistance for antireflective articles)  
 RN 157287-40-6 HCAPLUS  
 CN Silane, trimethoxy(3,3,3-trifluoropropyl)-, homopolymer (9CI) (CA INDEX  
 NAME)

CM 1

CRN 429-60-7

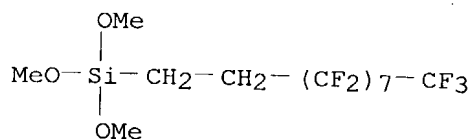
CMF C6 H13 F3 O3 Si



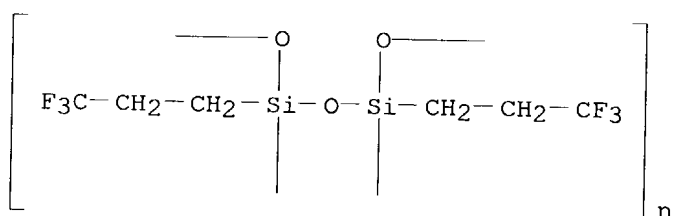
RN 159412-13-2 HCAPLUS  
 CN Silane, (3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,10-  
 heptadecafluorodecyl)trimethoxy-, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 83048-65-1  
CMF C13 H13 F17 O3 Si



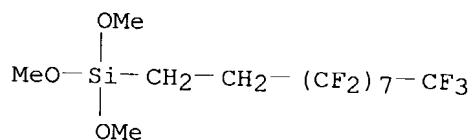
RN 162023-57-6 HCAPLUS  
CN Poly[[1,3-bis(3,3,3-trifluoropropyl)-1,3:1,3-disiloxanediylidene]-1,3-bis(oxy)] (9CI) (CA INDEX NAME)



RN 395084-01-2 HCAPLUS  
CN Silicic acid (H<sub>4</sub>SiO<sub>4</sub>), tetraethyl ester, polymer with (3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,10-heptafluorodecyl)trimethoxysilane and trimethoxy(3,3,3-trifluoropropyl)silane (9CI) (CA INDEX NAME)

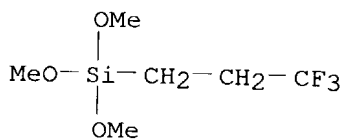
CM 1

CRN 83048-65-1  
CMF C13 H13 F17 O3 Si



CM 2

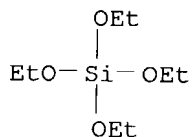
CRN 429-60-7  
CMF C6 H13 F3 O3 Si





CM 3

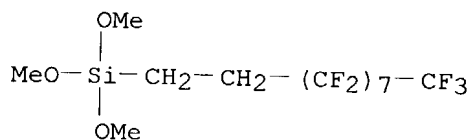
CRN 78-10-4  
CMF C8 H20 O4 Si



RN 399039-03-3 HCAPLUS  
CN Silane, (3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,10-heptafluorodecyl)trimethoxy-, polymer with trimethoxymethylsilane and trimethoxy(3,3,3-trifluoropropyl)silane (9CI) (CA INDEX NAME)

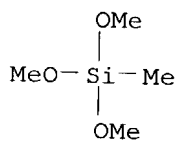
CM 1

CRN 83048-65-1  
CMF C13 H13 F17 O3 Si



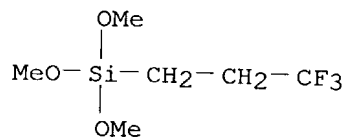
CM 2

CRN 1185-55-3  
CMF C4 H12 O3 Si



CM 3

CRN 429-60-7  
CMF C6 H13 F3 O3 Si



L24 ANSWER 10 OF 27 HCAPLUS COPYRIGHT 2003 ACS on STN  
 AN 2001:840460 HCAPLUS  
 DN 135:373086  
 ED Entered STN: 19 Nov 2001  
 TI Low-reflective hard coating **compositions** with good scratch  
 resistance for coating plastic moldings as optical parts  
 IN Inaba, Yoshiki; Yoshihara, Toshiaki; Ohata, Koichi  
 PA Toppan Printing Co., Ltd., Japan  
 SO Jpn. Kokai Tokkyo Koho, 8 pp.  
 CODEN: JKXXAF  
 DT Patent  
 LA Japanese  
 IC ICM C09D004-06  
 ICS C08F002-44; C08F002-48; C08F283-12; C08F290-06; G02B001-10;  
 G02B001-11

CC 42-10 (Coatings, Inks, and Related Products)  
 Section cross-reference(s): 73

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2001316604	A2	20011116	JP 2000-131732	20000428
PRAI	JP 2000-131732		20000428		
OS	MARPAT 135:373086				
AB	<p>The <b>composition</b> comprises (A) a mixture of hydrolyzates of a perfluoroalkyl-containing silane and a (meth)acrylic-functional silane, and metal oxide microparticles and (B) a multifunctional (meth)acrylate. Thus, 1.6 parts mixture of hydrolyzate of 70/30 tridecane-fluorooctyltrimethoxysilane and 3-acryloyloxypropyltrimethoxysilane and IPA ST (colloidal silica) was blended with dipentaerythritol hexaacrylate 20, pentaerythritol triacrylate 60, trimethylolpropane triacrylate 20 and Darocure 1173 (<b>initiator</b>) 4 g, coated on a polyester film and <b>cured</b> by UV-irradiation to give a hard coating film showing reflectivity (550 nm) 1.9%, pencil hardness 3H, and good scratch resistance.</p>				
ST	<p>perfluoroalkylsilane acrylic silane hydrolyzate silica coating; silsesquioxane acrylic coating plastic optical part; polyester molding silsesquioxane acrylic coating antireflection; scratch resistance coated plastic molding</p>				
IT	<p>Silsesquioxanes            RL: DEV (Device component use); IMF (Industrial manufacture); POF (Polymer in formulation); PREP (Preparation); USES (Uses)            (acrylic, fluorine-containing; low-reflective hard coating compns. with good scratch resistance for coating plastic moldings as optical parts)</p>				
IT	<p>Fluoropolymers, uses            RL: DEV (Device component use); IMF (Industrial manufacture); POF (Polymer in formulation); PREP (Preparation); USES (Uses)            (acrylic-silsesquioxane-; low-reflective hard coating compns. with good scratch resistance for coating plastic moldings as optical parts)</p>				
IT	<p>Antireflective films            Optical materials            (low-reflective hard coating compns. with good scratch resistance for coating plastic moldings as optical parts)</p>				
IT	<p>Coating materials            (scratch-resistant; low-reflective hard coating compns. with good scratch resistance for coating plastic moldings as optical parts)</p>				
IT	<p>Polyesters, uses</p>				

RL: DEV (Device component use); USES (Uses)  
 (substrate; low-reflective hard coating compns. with good scratch  
 resistance for coating plastic moldings as optical parts)

IT 7631-86-9, IPA-ST, uses  
 RL: MOA (Modifier or additive use); USES (Uses)  
 (colloidal; low-reflective hard coating compns. with good scratch  
 resistance for coating plastic moldings as optical parts)

IT 9011-14-7, Poly(methyl methacrylate)  
 RL: MOA (Modifier or additive use); USES (Uses)  
 (crosslinked; low-reflective hard coating compns. with good scratch  
 resistance for coating plastic moldings as optical parts)

IT **373633-35-3P**  
 RL: DEV (Device component use); **IMF (Industrial manufacture)**;  
 POF (Polymer in formulation); **PREP (Preparation)**; USES (Uses)  
 (low-reflective hard coating compns. with good scratch resistance for  
 coating plastic moldings as optical parts)

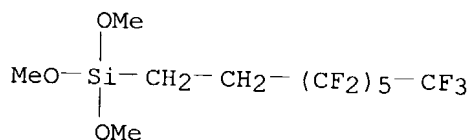
IT 203665-47-8, MR 2G  
 RL: MOA (Modifier or additive use); USES (Uses)  
 (low-reflective hard coating compns. with good scratch resistance for  
 coating plastic moldings as optical parts)

IT **373633-35-3P**  
 RL: DEV (Device component use); **IMF (Industrial manufacture)**;  
 POF (Polymer in formulation); **PREP (Preparation)**; USES (Uses)  
 (low-reflective hard coating compns. with good scratch resistance for  
 coating plastic moldings as optical parts)

RN 373633-35-3 HCAPLUS  
 CN 2-Propenoic acid, 2-ethyl-2-[[[(1-oxo-2-propenyl)oxy]methyl]-1,3-  
 propanediyl ester, polymer with 2-(hydroxymethyl)-2-[[[(1-oxo-2-  
 propenyl)oxy]methyl]-1,3-propanediyl di-2-propenoate, 2-[[3-[[[(1-oxo-2-  
 propenyl)oxy]-2,2-bis[[[(1-oxo-2-propenyl)oxy]methyl]propoxy]methyl]-2-[[[(1-  
 oxo-2-propenyl)oxy]methyl]-1,3-propanediyl di-2-propenoate,  
 3-(trimethoxysilyl)propyl 2-propenoate and trimethoxy(3,3,4,4,5,5,6,6,7,7,  
 8,8,8-tridecafluorooctyl)silane (9CI) (CA INDEX NAME)

CM 1

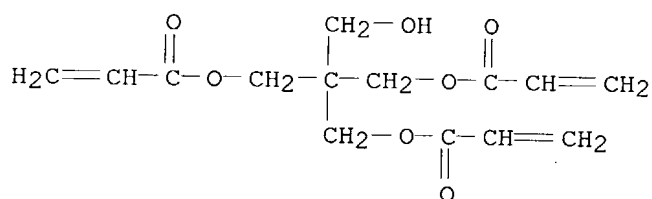
CRN 85857-16-5  
 CMF C11 H13 F13 O3 Si



CM 2

CRN 29570-58-9  
 CMF C28 H34 O13





L24 ANSWER 11 OF 27 HCAPLUS COPYRIGHT 2003 ACS on STN  
 AN 2001:703501 HCAPLUS  
 DN 135:264649  
 ED Entered STN: 26 Sep 2001  
 TI Curable fluorine-containing liquid coating, use of the coating, and manufacture of antireflection material  
 IN Nojima, Takayuki; Morimoto, Yoshihiro; Ikeda, Tomoyuki  
 PA NOF Corporation, Japan  
 SO Jpn. Kokai Tokkyo Koho, 13 pp.  
 CODEN: JKXXAF  
 DT Patent  
 LA Japanese  
 IC ICM C09D004-02  
 ICS C08F002-44; C08F002-50; C08F020-22; C08J007-04; C09D005-32; G02B001-11; C08L001-12; C08L033-04; C08L067-02; C08L069-00  
 CC 74-13 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)  
 Section cross-reference(s): 38, 42

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2001262011	A2	20010926	JP 2000-73447	20000316
PRAI	JP 2000-73447		20000316		

AB The liquid coating contains F-containing polyfunctional (meth)acrylate ester and

colloidal silica modified with a (meth)acryloyloxy-substituted silane coupler or a F-containing silane coupler. The above **composition** is used as (a) a F-containing film obtained by polymerizing and curing of the above **composition** associated with a hardener, which shows pencil hardness larger than H and  $n \leq 1.44$  and (b) an antireflection film obtained by applying the **composition** containing a hardener onto  $\geq 1$  side of a substrate and curing. An antireflection material is manufactured by adding of a UV-sensitive hardener to the above **composition**, applying the mixture on a substrate. and curing of the **composition** by UV irradiation in an inert gas atmospheric. An electrooptical display device using the antireflection

material showing high hardness, i.e., wear resistance, is also claimed.  
 ST curable fluorine contg liq coating; acrylate methacrylate fluorine contg coating; acryloyoxy silane coupler treated silica coating; antireflection coating film hardness wear resistance; electrooptical display antireflection material surface hardness  
 IT Coating materials  
 (UV-curable; curable liquid coating of fluorine-containing acrylate containing reactive silane-treated silica for antireflection film for display surface)  
 IT Coating materials  
 (abrasion-resistant; curable liquid coating of fluorine-containing acrylate

containing reactive silane-treated silica for antireflection film for display surface)

IT Fluoropolymers, properties

RL: DEV (Device component use); PRP (Properties); USES (Uses)  
(acrylic; curable liquid coating of fluorine-containing acrylate containing reactive silane-treated silica for antireflection film for display surface)

IT Antireflective films

Electrooptical imaging devices  
(curable liquid coating of fluorine-containing acrylate containing reactive silane-treated silica for antireflection film for display surface)

IT Polyethers, uses

RL: MOA (Modifier or additive use); USES (Uses)  
(di-Me siloxane-, BYK 306; in curable liquid coating of fluorine-containing acrylate containing reactive silane-treated silica for antireflection film for display surface)

IT Polysiloxanes, uses

RL: MOA (Modifier or additive use); USES (Uses)  
(di-Me, polyether-, BYK 306; in curable liquid coating of fluorine-containing acrylate containing reactive silane-treated silica for antireflection film for display surface)

IT Polyesters, uses

RL: DEV (Device component use); USES (Uses)  
(film, substrate; curable liquid coating of fluorine-containing acrylate containing reactive silane-treated silica for antireflection film for display surface)

IT Crosslinking agents

Polymerization catalysts  
(in curable liquid coating of fluorine-containing acrylate containing reactive silane-treated silica for antireflection film for display surface)

IT Polycarbonates, miscellaneous

RL: MSC (Miscellaneous)  
(substrate; curable liquid coating of fluorine-containing acrylate containing reactive silane-treated silica for antireflection film for display surface)

IT 36446-02-3P, Trimethylolpropane triacrylate homopolymer 126095-71-4P, Dipentaerythritol hexaacrylate-polyethylene glycol diacrylate copolymer  
RL: DEV (Device component use); IMF (Industrial manufacture); PREP (Preparation); USES (Uses)

(curable liquid coating for antireflection film for display surface associated with)

IT 1314-13-2, Zinc oxide, uses

RL: MOA (Modifier or additive use); USES (Uses)  
(curable liquid coating for antireflection film for display surface associated with antiglare layer containing)

IT 361534-30-7P 361534-31-8P

RL: DEV (Device component use); IMF (Industrial manufacture); PRP (Properties); PREP (Preparation); USES (Uses)  
(curable liquid coating of fluorine-containing acrylate containing reactive silane-treated silica for antireflection film for display surface)

IT 9012-09-3, Triacetylcellulose 25038-59-9, PET (polyester), uses

RL: DEV (Device component use); USES (Uses)  
(film, substrate; curable liquid coating of fluorine-containing acrylate containing reactive silane-treated silica for antireflection film for display surface)

IT 947-19-3, Irgacure 184  
 RL: CAT (Catalyst use); USES (Uses)  
 (polym. **initiators**; curable liquid coating of fluorine-containing acrylate containing reactive silane-treated silica for antireflection film for display surface)

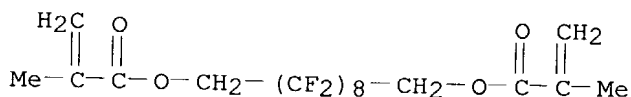
IT 9011-14-7, Poly(methyl methacrylate)  
 RL: MSC (Miscellaneous)  
 (substrate; curable liquid coating of fluorine-containing acrylate containing reactive silane-treated silica for antireflection film for display surface)

IT **361534-30-7P 361534-31-8P**  
 RL: DEV (Device component use); **IMF (Industrial manufacture)**;  
 PRP (Properties); **PREP (Preparation)**; USES (Uses)  
 (curable liquid coating of fluorine-containing acrylate containing reactive silane-treated silica for antireflection film for display surface)

RN 361534-30-7 HCAPLUS  
 CN 2-Propenoic acid, 2-methyl-, 2,2,3,3,4,4,5,5,6,6,7,7,8,8,9,9-hexadecafluoro-1,10-decanediyl ester, (3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,10-heptadecafluorodecyl)trimethoxysilane, 2,2,3,3,4,4,5,5,6,6,7,7,8,8,9,9-hexadecafluoro-1,10-decanediyl di-2-propenoate, silica and 3-(trimethoxysilyl)propyl 2-propenoate (9CI) (CA INDEX NAME)

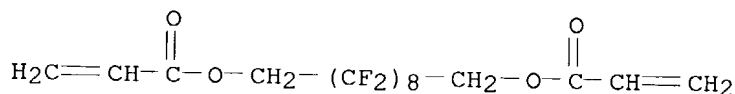
CM 1

CRN 361534-29-4  
 CMF C18 H14 F16 O4



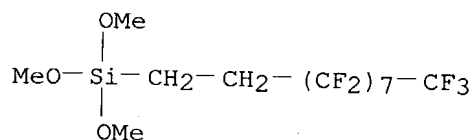
CM 2

CRN 125635-55-4  
 CMF C16 H10 F16 O4



CM 3

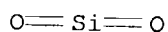
CRN 83048-65-1  
 CMF C13 H13 F17 O3 Si



CM 4

CRN 7631-86-9

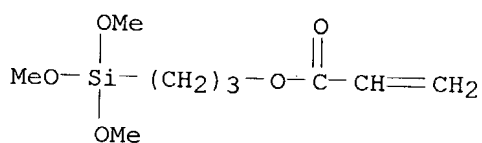
CMF O2 Si



CM 5

CRN 4369-14-6

CMF C9 H18 O5 Si



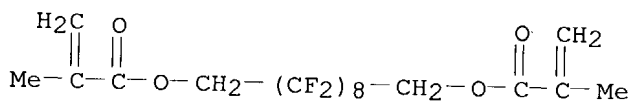
RN 361534-31-8 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, 2,2,3,3,4,4,5,5,6,6,7,7,8,8,9,9-hexadecafluoro-1,10-decanediyl ester, polymer with (3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,10-heptadecafluorodecyl)trimethoxysilane, silica and 3-(trimethoxysilyl)propyl 2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 361534-29-4

CMF C18 H14 F16 O4

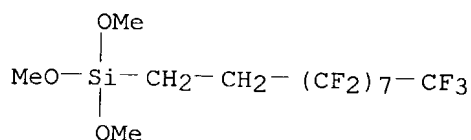


CM 2

CRN 83048-65-1

CMF C13 H13 F17 O3 Si

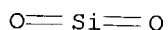




CM 3

CRN 7631-86-9

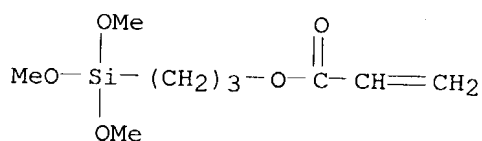
CMF 02 Si



CM 4

CRN 4369-14-6

CMF C9 H18 O5 Si



L24 ANSWER 12 OF 27 HCAPLUS COPYRIGHT 2003 ACS on STN  
 AN 2001:684011 HCAPLUS  
 DN 135:233906  
 ED Entered STN: 19 Sep 2001  
 TI Unsaturated polymer, photosensitive resin **composition** containing  
 it, its film, and its cured product  
 IN Mori, Tetsu  
 PA Nippon Kayaku Co., Ltd., Japan  
 SO Jpn. Kokai Tokkyo Koho, 8 pp.  
 CODEN: JKXXAF  
 DT Patent  
 LA Japanese  
 IC ICM C08G059-17  
 ICS C08F002-44; C08F002-48; C08F290-04; C08J005-18; G03F007-027;  
 G03F007-033; H05K003-28; H05K003-46; C08L055-00  
 CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other  
 Reprographic Processes)

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2001253928	A2	20010918	JP 2000-66994	20000310
PRAI	JP 2000-66994		20000310		
AB	The unsatd. polymer is obtained by reaction of an epoxy methacrylate prepared from (a) a copolymer of F-containing ethylenically unsatd. monomers with epoxy-containing ethylenically unsatd. monomers, (b) a compound having an				

ethylenically unsatd. double bond, and a CO<sub>2</sub>H group in a mol., and optionally (c) a saturated monocarboxylic acid, optionally with (d) a polybasic acid anhydride. The photosensitive resin **composition** contains the above unsatd. polymer, a diluent, and a photopolymn. **initiator**. The film and its cured product of the **composition** are also claimed. The **composition** and film gives resist patterns by selective **UV** exposure and its **cured** product shows low dielec. constant and good solder-heat resistance.

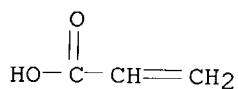
- ST fluorine epoxy methacrylate photoresist film; dielec film ethylenic unsatd polymer curing
- IT Electric insulators  
Photoresists  
Plastic films  
(photosensitive resin **composition** and film containing F-containing epoxy methacrylate polymer giving cured product with low dielec. constant)
- IT Epoxy resins, uses  
RL: TEM (Technical or engineered material use); USES (Uses)  
(photosensitive resin **composition** and film containing F-containing epoxy methacrylate polymer giving cured product with low dielec. constant)
- IT **359404-61-8P**  
RL: PNU (Preparation, unclassified); TEM (Technical or engineered material use); **PREP (Preparation)**; USES (Uses)  
(photosensitive resin **composition** and film containing F-containing epoxy methacrylate polymer giving cured product with low dielec. constant)
- IT 531-18-0, Hexamethylolmelamine 26570-48-9, Kayarad PEG 400DA  
77641-99-7, Kayarad DPHA 85305-70-0, EOCN 104S  
RL: TEM (Technical or engineered material use); USES (Uses)  
(photosensitive resin **composition** and film containing F-containing epoxy methacrylate polymer giving cured product with low dielec. constant)
- IT **359404-61-8P**  
RL: PNU (Preparation, unclassified); TEM (Technical or engineered material use); **PREP (Preparation)**; USES (Uses)  
(photosensitive resin **composition** and film containing F-containing epoxy methacrylate polymer giving cured product with low dielec. constant)
- RN 359404-61-8 HCAPLUS
- CN 2-Propenoic acid, 2-methyl-, oxiranylmethyl ester, polymer with trifluoroethyl 2-methyl-2-propenoate, hydrogen butanedioate 2-propenoate (9CI) (CA INDEX NAME)
- CM 1
- CRN 110-15-6
- CMF C4 H6 O4

HO<sub>2</sub>C-CH<sub>2</sub>-CH<sub>2</sub>-CO<sub>2</sub>H

CM 2

CRN 79-10-7

CMF C3 H4 O2



CM 3

CRN 179408-99-2

CMF (C7 H10 O3 . C6 H7 F3 O2)x

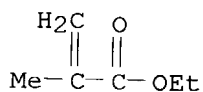
CCI PMS

CM 4

CRN 38785-10-3

CMF C6 H7 F3 O2

CCI IDS

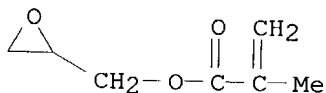


3 ( D1-F )

CM 5

CRN 106-91-2

CMF C7 H10 O3



L24 ANSWER 13 OF 27 HCAPLUS COPYRIGHT 2003 ACS on STN  
 AN 2001:461050 HCAPLUS  
 DN 135:62340  
 ED Entered STN: 27 Jun 2001  
 TI Thermosetting polymer **compositions**, their cured products, and  
 antireflective laminates  
 IN Itai, Shingo; Shimomura, Hiroomi; Nishikawa, Akira; Ukachi, Takashi  
 PA JSR Co., Ltd., Japan  
 SO Jpn. Kokai Tokkyo Koho, 18 pp.  
 CODEN: JKXXAF  
 DT Patent  
 LA Japanese  
 IC ICM C08F004-00  
 ICS C08F020-18; C09D004-06; C09D005-00; C09D127-12; C09D183-10;  
 G03F007-027; G03F007-029; G03F007-075  
 CC 38-3 (Plastics Fabrication and Uses)

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2001172309	A2	20010626	JP 1999-361628	19991220
PRAI	JP 1999-361628		19991220		
AB	The compns. contain F-containing polymeric polymerization <b>initiators</b> and (meth)acryloyl-containing compds. Thus, a <b>composition</b> containing 100 parts polymer prepared from Et vinyl ether-hexafluoropropylene-hydroxyethyl vinyl ether-perfluoro(Pr vinyl ether) copolymer and 4-(2-hydroxyethoxy)phenyl 2-hydroxy-2-Pr ketone-IPDI adduct and 20 parts trimethylolpropane triacrylate was applied on an acrylic board and <b>cured</b> by UV irradiation to give a film showing reflectance 2.1% and good abrasion and solvent resistance.				
ST	thermosetting antireflective laminate abrasion solvent resistance; fluorine vinyl IPDI ketone polymn <b>initiator</b> ; methylolpropane acrylate fluorine polymer antireflective film				
IT	Polysiloxanes, uses RL: CAT (Catalyst use); IMF (Industrial manufacture); POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses) (fluorine-containing, polyoxyalkylene-polyamide-, reaction products with ketone- and OH-containing compound-IPDI adducts; thermosetting polymer compns. for antireflective films with good abrasion and solvent resistance)				
IT	Antireflective films (multilayer; thermosetting polymer compns. for antireflective films with good abrasion and solvent resistance)				
IT	Polymerization catalysts (photopolymn.; thermosetting polymer compns. for antireflective films with good abrasion and solvent resistance)				
IT	Fluoropolymers, uses RL: CAT (Catalyst use); IMF (Industrial manufacture); POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses) (polysiloxane-, polyoxyalkylene-polyamide-, reaction products with ketone- and OH-containing compound-IPDI adducts; thermosetting polymer compns. for antireflective films with good abrasion and solvent resistance)				
IT	Fluoropolymers, uses RL: CAT (Catalyst use); IMF (Industrial manufacture); POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses) (reaction products with ketone- and OH-containing compound-IPDI adducts; thermosetting polymer compns. for antireflective films with good abrasion and solvent resistance)				
IT	Molded plastics, uses RL: PRP (Properties); TEM (Technical or engineered material use); USES (Uses) (thermosetting polymer compns. for antireflective films with good abrasion and solvent resistance)				
IT	Laminated plastics, uses RL: TEM (Technical or engineered material use); USES (Uses) (thermosetting polymer compns. for antireflective films with good abrasion and solvent resistance)				
IT	<b>345961-47-9P 345961-72-0P</b> RL: CAT (Catalyst use); IMF (Industrial manufacture); POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)				

(thermosetting polymer compns. for antireflective films with good abrasion and solvent resistance)

IT 36446-02-3P, Poly(trimethylolpropane triacrylate) 57592-66-2P, Poly(pentaerythritol tetraacrylate) 67653-78-5P, Poly(dipentaerythritol hexaacrylate)

RL: IMF (Industrial manufacture); POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(thermosetting polymer compns. for antireflective films with good abrasion and solvent resistance)

IT 248949-76-0P 345960-56-7P 345960-57-8P 345960-58-9P

RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)

(thermosetting polymer compns. for antireflective films with good abrasion and solvent resistance)

IT 4098-71-9, IPDI 7473-98-5, 2-Hydroxy-2-methyl-1-phenylpropan-1-one 106797-53-9

RL: RCT (Reactant); RACT (Reactant or reagent)

(thermosetting polymer compns. for antireflective films with good abrasion and solvent resistance)

IT 345961-47-9P 345961-72-0P

RL: CAT (Catalyst use); IMF (Industrial manufacture); POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(thermosetting polymer compns. for antireflective films with good abrasion and solvent resistance)

RN 345961-47-9 HCAPLUS

CN Ethanol, 2-(ethenyloxy)-, polymer with ethoxyethene, 1,1,1,2,2,3,3-heptafluoro-3-[(trifluoroethenyl)oxy]propane and 1,1,2,3,3,3-hexafluoro-1-propene, ester with [3-[(carboxyamino)methyl]-3,5,5-trimethylcyclohexyl]carbamic acid mono[2-[4-(2-hydroxy-2-methyl-1-oxopropyl)phenoxy]ethyl] ester (9CI) (CA INDEX NAME)

CM 1

CRN 345961-46-8

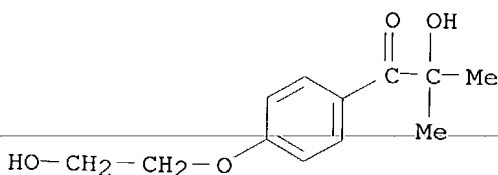
CMF C24 H36 N2 O7

CCI IDS

CM 2

CRN 106797-53-9

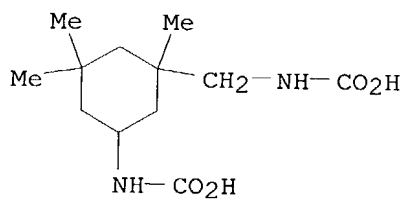
CMF C12 H16 O4



CM 3

CRN 52337-42-5

CMF C12 H22 N2 O4



CM 4

CRN 345960-56-7

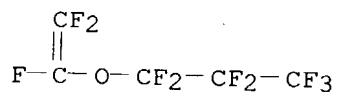
CMF (C5 F10 O . C4 H8 O2 . C4 H8 O . C3 F6) x

CCI PMS

CM 5

CRN 1623-05-8

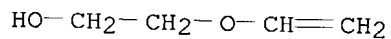
CMF C5 F10 O



CM 6

CRN 764-48-7

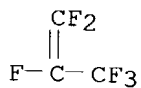
CMF C4 H8 O2



CM 7

CRN 116-15-4

CMF C3 F6



CM 8

CRN 109-92-2

CMF C4 H8 O

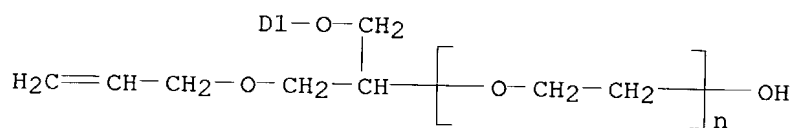
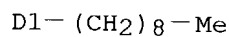


CM 5

CRN 111144-60-6

CMF (C2 H4 O)<sub>n</sub> C21 H34 O3

CCI IDS, PMS

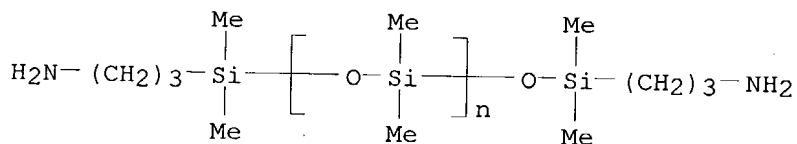


CM 6

CRN 97917-34-5

CMF (C2 H6 O Si)<sub>n</sub> C10 H28 N2 O Si2

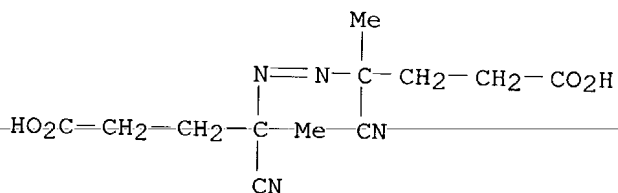
CCI PMS



CM 7

CRN 2638-94-0

CMF C12 H16 N4 O4

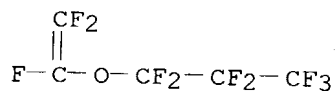


CM 8

CRN 1623-05-8



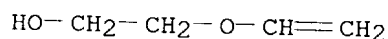
CMF C5 F10 O



CM 9

CRN 764-48-7

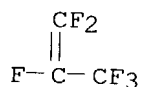
CMF C4 H8 O2



CM 10

CRN 116-15-4

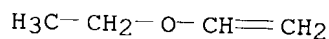
CMF C3 F6



CM 11

CRN 109-92-2

CMF C4 H8 O



IT 248949-76-0P 345960-56-7P

RL: IMF (Industrial manufacture); RCT (Reactant); PREP

(Preparation); RACT (Reactant or reagent)

(thermosetting polymer compns. for antireflective films with good abrasion and solvent resistance)

RN 248949-76-0 HCAPLUS

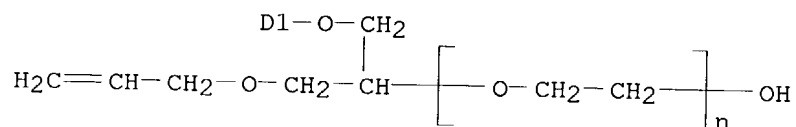
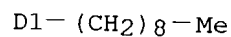
CN Pentanoic acid, 4,4'-azobis[4-cyano-, polymer with  $\alpha$ -[(3-aminopropyl)dimethylsilyl]- $\omega$ -[[[(3-aminopropyl)dimethylsilyl]oxy]poly[oxy(dimethylsilylene)], 2-(ethenyloxy)ethanol, ethoxyethene, 1,1,1,2,2,3,3-heptafluoro-3-[(trifluoroethenyl)oxy]propane, 1,1,2,3,3,3-hexafluoro-1-propene and  $\alpha$ -[1-[(nonylphenoxy)methyl]-2-(2-propenyloxy)ethyl]- $\omega$ -hydroxypoly(oxy-1,2-ethanediyl) (9CI) (CA INDEX NAME)

CM 1

CRN 111144-60-6

CMF (C2 H4 O)<sub>n</sub> C21 H34 O3

CCI IDS, PMS

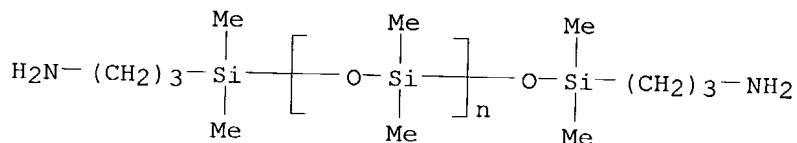


CM 2

CRN 97917-34-5

CMF (C2 H6 O Si)<sub>n</sub> C10 H28 N2 O Si2

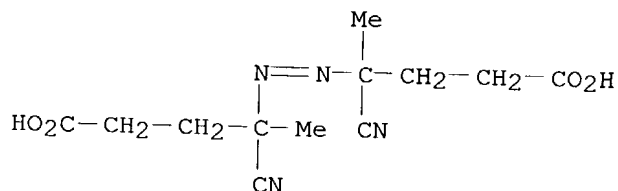
CCI PMS



CM 3

CRN 2638-94-0

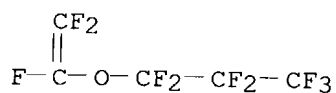
CMF C12 H16 N4 O4



CM 4

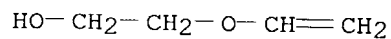
CRN 1623-05-8

CMF C5 F10 O



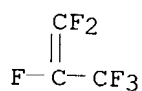
CM 5

CRN 764-48-7  
CMF C4 H8 O2



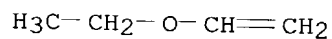
CM 6

CRN 116-15-4  
CMF C3 F6



CM 7

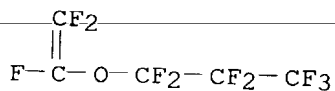
CRN 109-92-2  
CMF C4 H8 O



RN 345960-56-7 HCAPLUS  
CN Ethanol, 2-(ethenyloxy)-, polymer with ethoxyethene, 1,1,1,2,2,3,3-heptafluoro-3-[(trifluoroethenyl)oxy]propane and 1,1,2,3,3,3-hexafluoro-1-propene (9CI) (CA INDEX NAME)

CM 1

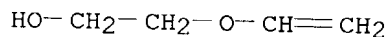
CRN 1623-05-8  
CMF C5 F10 O



CM 2

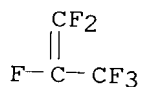
CRN 764-48-7

CMF C4 H8 O2



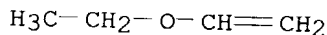
CM 3

CRN 116-15-4  
CMF C3 F6



CM 4

CRN 109-92-2  
CMF C4 H8 O



L24 ANSWER 14 OF 27 HCAPLUS COPYRIGHT 2003 ACS on STN  
AN 2001:217846 HCAPLUS  
DN 134:253789  
ED Entered STN: 28 Mar 2001  
TI Coatings and actinic ray-curable coating **compositions** for  
writing boards  
IN Terauchi, Makoto; Hosokawa, Noritaka; Hayama, Kazuhide  
PA Mitsubishi Chemical Corp., Japan  
SO Jpn. Kokai Tokkyo Koho, 14 pp.  
CODEN: JKXXAF  
DT Patent  
LA Japanese  
IC ICM B43L001-10  
ICS C09D004-00  
CC 42-7 (Coatings, Inks, and Related Products)  
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2001080290	A2	20010327	JP 1999-261605	19990916
PRAI	JP 1999-261605		19990916		
AB	The coatings, having high resistance to abrasion and soiling, good transparency, writability, and durability, have water contact angles $\geq 90^\circ$ and EtOH contact angle $\leq 10^\circ$ . The compns. comprise 1-40 parts of polymers having quaternary ammonium groups, (meth)acryloyl groups, and organopolysiloxane units bonded to main chains via N and 60-99 parts of polyfunctional (meth)acrylates having $\geq 3$ (meth)acryloyl groups. Thus, 2-hydroxyethyl methacrylate-2-ethylhexyl methacrylate-N,N-dimethylaminoethyl methacrylate copolymer was reacted with isophorone diisocyanate, pentaerythritol triacrylate, and				

- pentaerythritol tetraacrylate, then with Me chloride, and with TSF 4700 (amino-containing siloxane) to give a polymer, 10 parts of which was mixed with 90 parts of dipentaerythritol hexaacrylate, an **initiator**, and a solvent. The resulting **composition** was applied on a PET film, and **UV-cured** to give a coating showing haze 1.5%, water contact angle 94°, EtOH contact angle 10°, and good erasability of a marking ink.
- ST actinic ray curable coating writing board; water contact angle coating writing board; ethanol contact angle coating writing board; acrylic siloxane coating writing board surface
- IT Contact angle  
(**UV-curable** coatings with controlled contact angle for writing boards)
- IT Coating materials  
(abrasion-resistant; **UV-curable** coatings with controlled contact angle for writing boards)
- IT Polyurethanes, uses  
RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(acrylic-polysiloxane-, coatings; **UV-curable** coatings with controlled contact angle for writing boards)
- IT Polysiloxanes, uses  
RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(acrylic-polyurethane-, coatings; **UV-curable** coatings with controlled contact angle for writing boards)
- IT Polysiloxanes, uses  
RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(amino, polymers with acryloyl polymers and acrylates, coatings; **UV-curable** coatings with controlled contact angle for writing boards)
- IT Coating materials  
(antisoiling; **UV-curable** coatings with controlled contact angle for writing boards)
- IT Writing instruments  
(boards; **UV-curable** coatings with controlled contact angle for writing boards)
- IT 331443-41-5DP, polymers with amino-containing siloxanes and dipentaerythritol hexaacrylate  
RL: DEV (Device component use); IMF (Industrial manufacture); PRP (Properties); PREP (Preparation); USES (Uses)  
(coatings; **UV-curable** coatings with controlled contact angle for writing boards)
- IT 29570-58-9DP, Dipentaerythritol hexaacrylate, polymers with acryloyl-, quaternary ammonium-, and siloxane-containing polymers **331443-43-7DP**, polymers with amino-containing siloxanes and dipentaerythritol hexaacrylate 331443-45-9DP, polymers with amino-containing siloxanes and dipentaerythritol hexaacrylate 331443-47-1DP, polymers with amino-containing siloxanes and dipentaerythritol hexaacrylate **331443-49-3DP**, polymers with amino-containing siloxanes and dipentaerythritol hexaacrylate 331443-51-7DP, polymers with amino-containing siloxanes and dipentaerythritol hexaacrylate  
RL: **IMF (Industrial manufacture)**; PRP (Properties); TEM (Technical or engineered material use); **PREP (Preparation)**; USES (Uses)  
(coatings; **UV-curable** coatings with controlled contact angle for writing boards)
- IT **331443-43-7DP**, polymers with amino-containing siloxanes and

dipentaerythritol hexaacrylate **331443-49-3DP**, polymers with amino-containing siloxanes and dipentaerythritol hexaacrylate  
 RL: **IMF (Industrial manufacture)**; PRP (Properties); TEM (Technical or engineered material use); **PREP (Preparation)**; USES (Uses)

(coatings; **UV-curable** coatings with controlled contact angle for writing boards)

RN 331443-43-7 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, 2-(dimethylamino)ethyl ester, polymer with 2,2-bis[[1-oxo-2-propenyl]oxy]methyl]-1,3-propanediyl di-2-propenoate, 2-ethylhexyl 2-methyl-2-propenoate, 3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,10-heptadecafluorodecyl 2-methyl-2-propenoate, 2-hydroxyethyl 2-methyl-2-propenoate, 2-(hydroxymethyl)-2-[[1-oxo-2-propenyl]oxy]methyl]-1,3-propanediyl di-2-propenoate and 5-isocyanato-1-(isocyanatomethyl)-1,3,3-trimethylcyclohexane, compd. with chloromethane (9CI) (CA INDEX NAME)

CM 1

CRN 74-87-3

CMF C H3 Cl

H3C-Cl

CM 2

CRN 331443-42-6

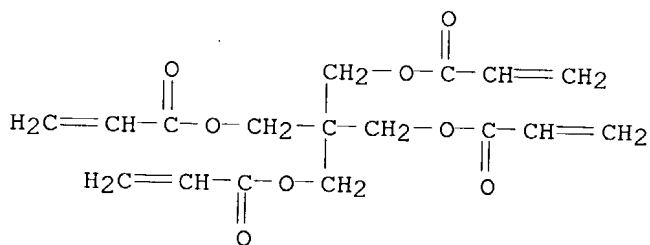
CMF (C17 H20 O8 . C14 H18 O7 . C14 H9 F17 O2 . C12 H22 O2 . C12 H18 N2 O2 . C8 H15 N O2 . C6 H10 O3)x

CCI PMS

CM 3

CRN 4986-89-4

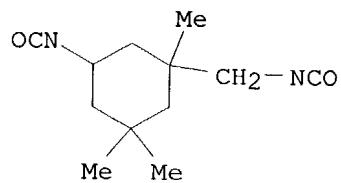
CMF C17 H20 O8



CM 4

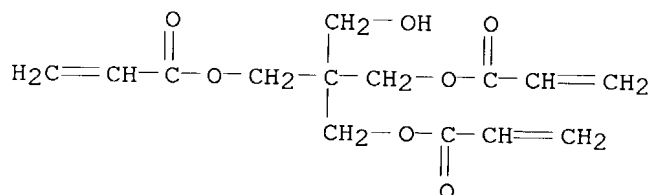
CRN 4098-71-9

CMF C12 H18 N2 O2



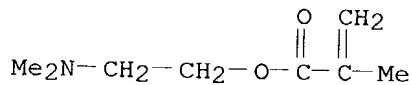
CM 5

CRN 3524-68-3  
CMF C14 H18 O7



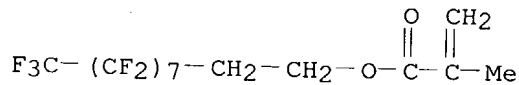
CM 6

CRN 2867-47-2  
CMF C8 H15 N O2



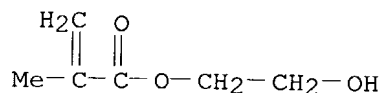
CM 7

CRN 1996-88-9  
CMF C14 H9 F17 O2



CM 8

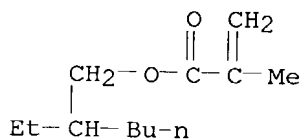
CRN 868-77-9  
CMF C6 H10 O3



CM 9

CRN 688-84-6

CMF C12 H22 O2



RN 331443-49-3 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, 2-(dimethylamino)ethyl ester, polymer with 2,2-bis[[ (1-oxo-2-propenyl)oxy]methyl]-1,3-propanediyl di-2-propenoate, 3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,10-heptafluorodecyl 2-methyl-2-propenoate, 2-hydroxyethyl 2-methyl-2-propenoate, 2-(hydroxymethyl)-2-[[ (1-oxo-2-propenyl)oxy]methyl]-1,3-propanediyl di-2-propenoate and 5-isocyanato-1-(isocyanatomethyl)-1,3,3-trimethylcyclohexane, compd. with chloromethane (9CI) (CA INDEX NAME)

CM 1

CRN 74-87-3

CMF C H3 Cl

H3C-Cl

CM 2

CRN 331443-48-2

CMF (C17 H20 O8 . C14 H18 O7 . C14 H9 F17 O2 . C12 H18 N2 O2 . C8 H15 N O2 . C6 H10 O3)x

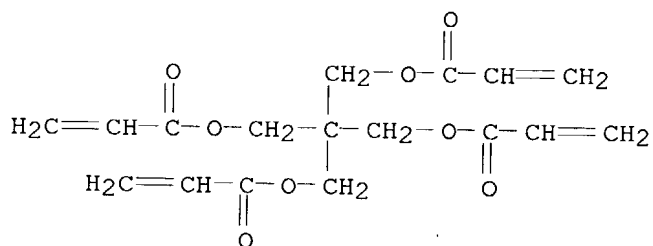
CCI PMS

CM 3

CRN 4986-89-4

CMF C17 H20 O8

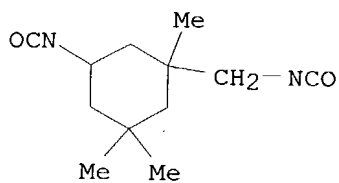




CM 4

CRN 4098-71-9

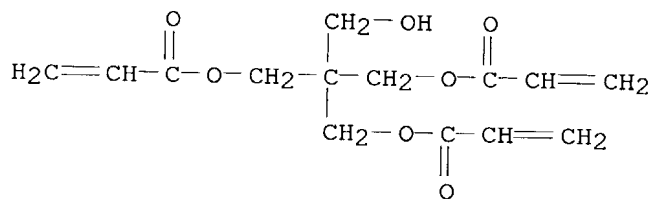
CMF C12 H18 N2 O2



CM 5

CRN 3524-68-3

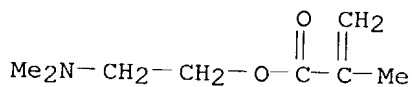
CMF C14 H18 O7



CM 6

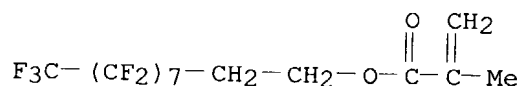
CRN 2867-47-2

CMF C8 H15 N O2



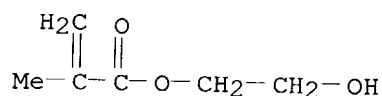
CM 7

CRN 1996-88-9  
CMF C14 H9 F17 O2



CM 8

CRN 868-77-9  
CMF C6 H10 O3



L24 ANSWER 15 OF 27 HCAPLUS COPYRIGHT 2003 ACS on STN  
AN 2001:168073 HCAPLUS

DN 134:208699

ED Entered STN: 09 Mar 2001

TI Low-temperature-applicable **UV-curable** resin

**compositions**

IN Minamino, Etsuo; Mimura, Kazuyoshi; Otani, Mitsuhiro

PA Daikin Industries, Ltd., Japan

SO PCT Int. Appl., 32 pp.

CODEN: PIXXD2

DT Patent

LA Japanese

IC ICM C08L101-04

ICS C08J003-28; C09D201-04; F16J015-10

CC 37-6 (Plastics Manufacture and Processing)

Section cross-reference(s): 39, 42

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2001016234	A1	20010308	WO 2000-JP5780	20000828
	W: JP, US				
	RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
	EP 1227134	A1	20020731	EP 2000-955053	20000828
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI, CY				
PRAI	JP 1999-244653	A	19990831		
	WO 2000-JP5780	W	20000828		

AB Title comps., useful for coatings or magnetic disk gasket, contain polymers containing 0.001-10% I2 and/or Br, photochem. **initiators**, and polyfunctional unsatd. compds. A **composition** containing C2F4-C3F6-CH2:CF2-CF2:CF2O(CF2)2CH2I copolymer (containing 0.55% I2) 100, 1-hydroxycyclohexyl Ph ketone 1.4, and trimethylolpropane triacrylate 4.7 parts was pressed into a sheet and irradiated with UV at 25° to form a sheet showing good MEK resistance (non-soluble, at room temperature over 3

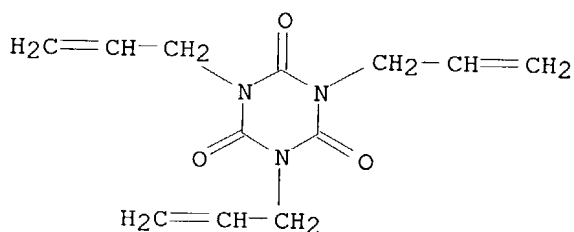
- h), break strength 6 MPa, elongation 700%, and JIS A hardness 56.
- ST low temp applicable **UV curable** iodo fluoropolymer  
**compn**; iodoalkyl acrylate polymer low temp applicable **UV**  
**curable compn**; coating low temp applicable **UV**  
**curable** iodo polymer; magnetic disk gasket **UV**  
**curable** iodo polymer **compn**
- IT Coating materials  
 (UV-curable; low-temperature-applicable and UV-  
**curable** I2- or Br-containing polymer compns. for coatings or  
 magnetic disk gaskets)
- IT Magnetic disks  
 (gasket; low-temperature-applicable and **UV-curable** I2- or  
 Br-containing polymer compns. for coatings or magnetic disk gaskets)
- IT Gaskets  
 (low-temperature-applicable and **UV-curable** I2- or  
 Br-containing polymer compns. for coatings or magnetic disk gaskets)
- IT Acrylic rubber  
 Fluoro rubber  
 Fluoropolymers, preparation  
 RL: IMF (Industrial manufacture); TEM (Technical or engineered material  
 use); PREP (Preparation); USES (Uses)  
 (low-temperature-applicable and **UV-curable** I2- or  
 Br-containing polymer compns. for coatings or magnetic disk gaskets)
- IT Crosslinking  
 Crosslinking catalysts  
 (photochem.; low-temperature-applicable and **UV-curable**  
 I2- or Br-containing polymer compns. for coatings or magnetic disk gaskets)
- IT 102-71-6, Triethanolamine, uses  
 RL: CAT (Catalyst use); USES (Uses)  
 (crosslinking accelerator; low-temperature-applicable and **UV-**  
**curable** I2- or Br-containing polymer compns. for coatings or  
 magnetic disk gaskets)
- IT 375-50-8, 1,4-Diiodooctafluorobutane  
 RL: CAT (Catalyst use); USES (Uses)  
 (for preparation of the polymers; low-temperature-applicable and **UV-**  
**curable** I2- or Br-containing polymer compns. for coatings or  
 magnetic disk gaskets)
- IT 119-61-9, Benzophenone, uses 947-19-3, 1-Hydroxycyclohexyl phenyl ketone  
 26163-01-9  
 RL: CAT (Catalyst use); USES (Uses)  
 (in polymer compns.; low-temperature-applicable and **UV-**  
**curable** I2- or Br-containing polymer compns. for coatings or  
 magnetic disk gaskets)
- IT 103746-89-0P, Hexafluoropropylene-triallyl isocyanurate-vinylidene  
 fluoride copolymer 177182-20-6P, Ethyl acrylate-2-iodoethyl  
 acrylate-triallyl isocyanurate copolymer 328262-97-1P,  
 Hexafluoropropylene-tetrafluoroethylene-trimethylolpropane  
 triacrylate-vinylidene fluoride-perfluorovinyl 1,1,2,2-tetrafluoro-3-  
 iodopropyl ether copolymer 328262-99-3P, Hexafluoropropylene-  
 tetrafluoroethylene-triallyl isocyanurate-vinylidene fluoride-  
 perfluorovinyl 1,1,2,2-tetrafluoro-3-iodopropyl ether copolymer  
 RL: IMF (Industrial manufacture); TEM (Technical or engineered  
 material use); PREP (Preparation); USES (Uses)  
 (rubber, sheets; low-temperature-applicable and **UV-curable**  
 I2- or Br-containing polymer compns. for coatings or magnetic disk gaskets)
- RE.CNT 14 THERE ARE 14 CITED REFERENCES AVAILABLE FOR THIS RECORD  
 RE  
 (1) Ausimont Spa; JP 09118797 A HCAPLUS

- (2) Ausimont Spa; JP 09118797 A HCAPLUS
- (3) Ausimont Spa; EP 761735 A1 HCAPLUS
- (4) Ausimont Spa; EP 761735 A1 HCAPLUS
- (5) Ausimont Spa; US 5656697 A 1997 HCAPLUS
- (6) Ausimont Spa; US 5656697 A 1997 HCAPLUS
- (7) Daikin Industries Ltd; JP 08157538 A 1996 HCAPLUS
- (8) Du Pont de Nemou Rs & Co E I; JP 07196878 A HCAPLUS
- (9) Du Pont de Nemou Rs & Co E I; EP 733085 A1 HCAPLUS
- (10) Du Pont de Nemou Rs & Co E I; WO 9515995 A1 1995 HCAPLUS
- (11) Du Pont de Nemours & Co E I; JP 07196878 A HCAPLUS
- (12) Du Pont de Nemours & Co E I; EP 733085 A1 HCAPLUS
- (13) Du Pont de Nemours & Co E I; WO 9515995 A1 1995 HCAPLUS
- (14) Nippon Mektron K K; JP 09255732 A 1997 HCAPLUS

IT **103746-89-0P**, Hexafluoropropylene-triallyl isocyanurate-vinylidene fluoride copolymer **328262-97-1P**, Hexafluoropropylene-tetrafluoroethylene-trimethylolpropane triacrylate-vinylidene fluoride-perfluorovinyl 1,1,2,2-tetrafluoro-3-iodopropyl ether copolymer **328262-99-3P**, Hexafluoropropylene-tetrafluoroethylene-triallyl isocyanurate-vinylidene fluoride-perfluorovinyl 1,1,2,2-tetrafluoro-3-iodopropyl ether copolymer  
 RL: **IMF (Industrial manufacture)**; TEM (Technical or engineered material use); **PREP (Preparation)**; USES (Uses)  
 (rubber, sheets; low-temperature-applicable and **UV-curable** I2- or Br-containing polymer compns. for coatings or magnetic disk gaskets)  
 RN 103746-89-0 HCAPLUS  
 CN 1,3,5-Triazine-2,4,6(1H,3H,5H)-trione, 1,3,5-tri-2-propenyl-, polymer with 1,1-difluoroethene and 1,1,2,3,3,3-hexafluoro-1-propene (9CI) (CA INDEX NAME)

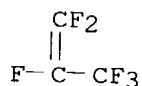
CM 1

CRN 1025-15-6  
 CMF C12 H15 N3 O3



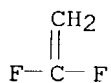
CM 2

CRN 116-15-4  
 CMF C3 F6



CM 3

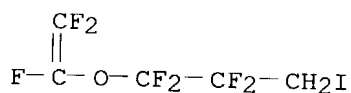
CRN 75-38-7  
CMF C2 H2 F2



RN 328262-97-1 HCAPLUS  
CN 2-Propenoic acid, 2-ethyl-2-[[[(1-oxo-2-propenyl)oxy]methyl]-1,3-propanediyl ester, polymer with 1,1-difluoroethene, 1,1,2,3,3,3-hexafluoro-1-propene, tetrafluoroethene and 1,1,2,2-tetrafluoro-3-iodo-1-[(trifluoroethenyl)oxy]propane (9CI) (CA INDEX NAME)

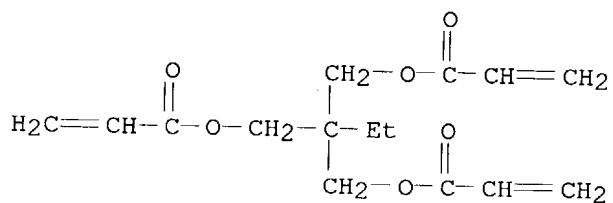
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CRN 106108-22-9  
CMF C5 H2 F7 I O



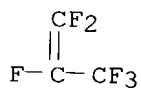
CM 2

CRN 15625-89-5  
CMF C15 H20 O6



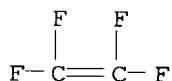
CM 3

CRN 116-15-4  
CMF C3 F6



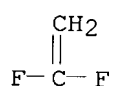
CM 4

CRN 116-14-3  
CMF C2 F4



CM 5

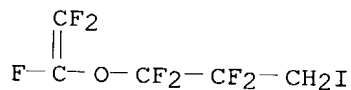
CRN 75-38-7  
CMF C2 H2 F2



RN 328262-99-3 HCAPLUS  
CN 1,3,5-Triazine-2,4,6(1H,3H,5H)-trione, 1,3,5-tri-2-propenyl-, polymer with 1,1-difluoroethene, 1,1,2,3,3,3-hexafluoro-1-propene, tetrafluoroethene and 1,1,2,2-tetrafluoro-3-iodo-1-[(trifluoroethenyl)oxy]propane (9CI) (CA INDEX NAME)

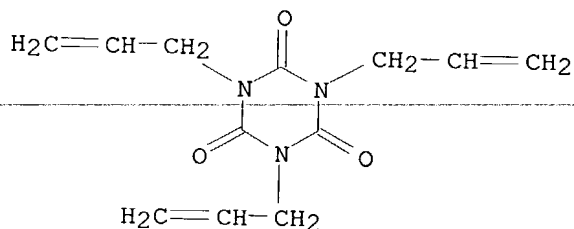
CM 1

CRN 106108-22-9  
CMF C5 H2 F7 I O



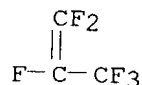
CM 2

CRN 1025-15-6  
CMF C12 H15 N3 O3



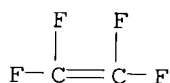
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CRN 116-15-4  
CMF C3 F6



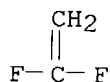
CM 4

CRN 116-14-3  
CMF C2 F4



CM 5

CRN 75-38-7  
CMF C2 H2 F2



L24 ANSWER 16 OF 27 HCAPLUS COPYRIGHT 2003 ACS on STN  
AN 2000:865387 HCAPLUS  
DN 134:43455  
ED Entered STN: 12 Dec 2000  
TI Liquid radiation-curable polyurethane acrylate **compositions** with  
low viscosity and Young's modulus and optical fibers coated therewith  
IN Kosakai, Shohei; Asano, Masatoshi; Ueno, Masaya; Kondo, Kazunori; Kaneko,  
Ichiro; Kobayashi, Toshimi  
PA Shin-Etsu Chemical Industry Co., Ltd., Japan  
SO Jpn. Kokai Tokkyo Koho, 11 pp.  
CODEN: JKXXAF

DT Patent

LA Japanese

IC ICM C08F290-06

ICS C03C025-24; C08F002-50; C09D005-00; C09D175-14; G02B006-44

CC 42-10 (Coatings, Inks, and Related Products)

Section cross-reference(s): 73

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2000344844	A2	20001212	JP 1999-155434	19990602
PRAI	JP 1999-155434		19990602		
AB	The compns. contain multifunctional polyoxyalkylene-polyurethane				

(meth)acrylate oligomers [containing  $\geq 2$  terminal (meth)acrylic groups],  
 $R1O(R2O)_nC(O)NHR2NHCO2R4O2CCR5:CH2$  [ $R1 = p-R6C6H4$ ,  $p-PhCMe2C6H4$ ;  $R2 = C1-4$   
saturated hydrocarbylene;  $R3 = 4\text{-methyl-1,3-phenylene}$ , methylene(trimethyl-1,3-  
cyclohexylene);  $R4 = \text{hydrocarbylene}$ ;  $R5 = H, Me$ ;  $R6 = C1-20$  saturated  
hydrocarbyl;  $n = 5-300$ ], ethylenically unsatd. compds., and light

polymerization

**initiators.** Thus, a 15.3:39.7:45:1.5 mixture of a polyurethane  
monoacrylate oligomer [A; prepared from Aronix M 113 (polyethylene glycol  
nonylphenyl ether acrylate), 2,4-TDI, 2-hydroxyethyl acrylate, and  
polypropylene glycol monononylphenyl ether], a polyurethane acrylate  
oligomer (prepared from Aronix M 113, polypropylene glycol, 2,4-TDI, A,  
polypropylene triol, and 2-hydroxyethyl acrylate), Aronix M 113, and  
Lucirin TPO (**initiator**) was UV-irradiated on a glass plate to  
give a film showing Young's modulus 0.075 and 0.18 kg/mm<sup>2</sup>, at 25 and  
-40°, resp., elongation at break 130%, and tensile strength 0.081  
kg/cm<sup>2</sup>.

ST radiation curable polyurethane acrylate low viscosity; polyoxyalkylene  
polyurethane monoacrylate oligomer **UV curing**; optical  
fiber coating urethane acrylate crosslinking

IT Coating materials

(**UV-curable**; radiation-curable

polyoxyalkylene-polyurethane acrylate compns. with low Young's modulus  
for optical fibers coating)

IT Polyoxyalkylenes, uses

RL: IMF (Industrial manufacture); RCT (Reactant); TEM (Technical or  
engineered material use); PREP (Preparation); RACT (Reactant or reagent);  
USES (Uses)

(diol and triol derivs., polymers with tolylene diisocyanate, reaction  
products with hydroxyethyl acrylate; radiation-curable  
polyoxyalkylene-polyurethane acrylate compns. with low Young's modulus  
for optical fibers coating)

IT Polyurethanes, uses

RL: IMF (Industrial manufacture); RCT (Reactant); TEM (Technical or  
engineered material use); PREP (Preparation); RACT (Reactant or reagent);  
USES (Uses)

(polyoxyalkylene-, acrylate-terminated; radiation-curable  
polyoxyalkylene-polyurethane acrylate compns. with low Young's modulus  
for optical fibers coating)

IT Polyurethanes, uses

RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or  
engineered material use); PREP (Preparation); USES (Uses)

(polyoxyalkylene-, acrylic; radiation-curable polyoxyalkylene-  
polyurethane acrylate compns. with low Young's modulus for optical  
fibers coating)

IT Optical fibers

(radiation-curable polyoxyalkylene-polyurethane acrylate compns. with  
low Young's modulus for optical fibers coating)

IT 2073-54-3DP, Aronix M 113, polymers with polyurethane acrylates  
312930-57-7DP, polymers with polyurethane acrylate and polyethylene glycol  
nonylphenyl ether acrylate 312930-59-9DP, polymers with polyurethane  
acrylate and polyethylene glycol nonylphenyl ether acrylate  
**312930-62-4P** 312932-19-7P

RL: **IMF (Industrial manufacture)**; PRP (Properties); TEM  
(Technical or engineered material use); **PREP (Preparation)**; USES  
(Uses)

(radiation-curable polyoxyalkylene-polyurethane acrylate compns. with  
low Young's modulus for optical fibers coating)

IT 584-84-9DP, 2,4-Tolylene diisocyanate, polymers with polypropylene glycol



diol and triol derivs., reaction products with hydroxyethyl acrylate  
 818-61-1DP, 2-Hydroxyethyl acrylate, reaction products with  
 polyoxyalkylene-polyurethane 25322-69-4DP, Polypropylene glycol, diol  
 and triol derivs., polymers with tolylene diisocyanate, reaction products  
 with hydroxyethyl acrylate 311311-65-6DP, Polypropylene  
 glycol-polytetramethylene glycol-2,4-tolylene diisocyanate copolymer,  
 reaction products with hydroxyethyl acrylate 312930-57-7P 312930-58-8P  
 312930-59-9P 312930-60-2P

RL: IMF (Industrial manufacture); RCT (Reactant); TEM (Technical or  
 engineered material use); PREP (Preparation); RACT (Reactant or reagent);  
 USES (Uses)

(radiation-curable polyoxyalkylene-polyurethane acrylate compns. with  
 low Young's modulus for optical fibers coating)

IT 312930-62-4P

RL: IMF (Industrial manufacture); PRP (Properties); TEM  
 (Technical or engineered material use); PREP (Preparation); USES  
 (Uses)

(radiation-curable polyoxyalkylene-polyurethane acrylate compns. with  
 low Young's modulus for optical fibers coating)

RN 312930-62-4 HCAPLUS

CN 2-Propenoic acid, 2-hydroxyethyl ester, polymer with 2,4-diisocyanato-1-  
 methylbenzene, 1-ethenylhexahydro-2H-azepin-2-one,  $\alpha$ -hydro- $\omega$ -  
 hydroxypoly(oxy-1,4-butanediyl),  $\alpha$ -hydro- $\omega$ -  
 hydroxypoly[oxy(methyl-1,2-ethanediyl)],  $\alpha$ -[[[methyl-3-[[[2-[(1-oxo-  
 2-propenyl)oxy]ethoxy]carbonyl]amino]phenyl]amino]carbonyl]- $\omega$ -(4-  
 methylphenoxy)poly[oxy(trifluoro(trifluoromethyl)-1,2-ethanediyl]] and  
 $\alpha$ -(1-oxo-2-propenyl)- $\omega$ -(4-nonylphenoxy)poly(oxy-1,2-  
 ethanediyl) (9CI) (CA INDEX NAME)

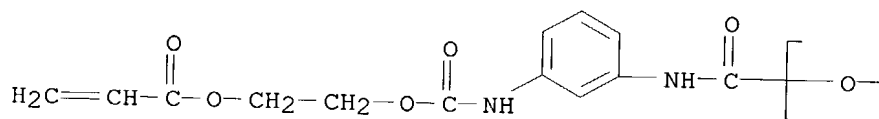
CM 1

CRN 312930-61-3

CMF (C3 F6 O)<sub>n</sub> C21 H22 N2 O6

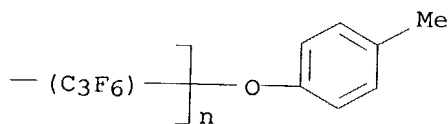
CCI IDS, PMS

PAGE 1-A



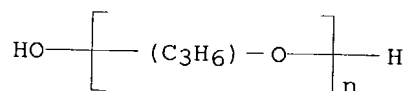
D1-Me

PAGE 1-B



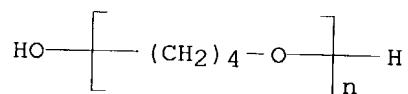
CM 2

CRN 25322-69-4  
CMF (C3 H6 O)<sub>n</sub> H2 O  
CCI IDS, PMS



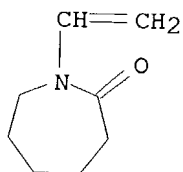
CM 3

CRN 25190-06-1  
CMF (C4 H8 O)<sub>n</sub> H2 O  
CCI PMS



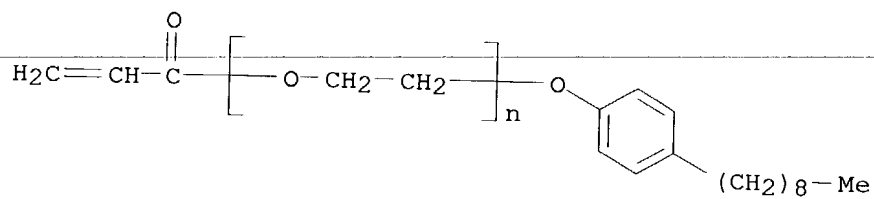
CM 4

CRN 2235-00-9  
CMF C8 H13 N O



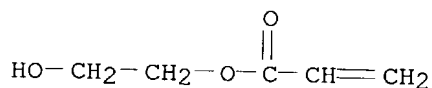
CM 5

CRN 2073-54-3  
CMF (C2 H4 O)<sub>n</sub> C18 H26 O2  
CCI PMS



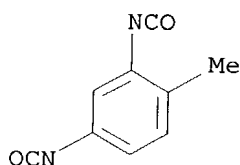
CM 6

CRN 818-61-1  
CMF C5 H8 O3



CM 7

CRN 584-84-9  
CMF C9 H6 N2 O2



L24 ANSWER 17 OF 27 HCAPLUS COPYRIGHT 2003 ACS on STN  
AN 2000:151535 HCAPLUS  
DN 132:209252  
ED Entered STN: 07 Mar 2000  
TI Surface grafting treatment by irradiation with active energy ray  
IN Okuo, Masaki; Harada, Eiji; Higuchi, Yoshiki  
PA Nippon Oil and Fats Co., Ltd., Japan  
SO Jpn. Kokai Tokkyo Koho, 17 pp.  
CODEN: JKXXAF

DT Patent  
LA Japanese  
IC ICM C08J007-06  
ICS C03C017-32; C08F002-00; C08F002-44; C08J007-18  
CC 42-10 (Coatings, Inks, and Related Products)  
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2000072904	A2	20000307	JP 1998-245763	19980831
PRAI	JP 1998-245763		19980831		
OS	MARPAT 132:209252				

AB Title method comprises (1) forming layers containing photopolymn. **initiating** group-containing compds. or polymers on substrates, (2) contacting the resulting layers with compns. containing radically polymerizable monomers and tackifiers, and (3) irradiating with active energy ray. Thus, a **composition** containing benzophenone, poly(Me methacrylate), and PPZ (phosphazene hexafunctional methacrylate) was applied on a polycarbonate substrate and dried to give a film, on which a **composition** containing methacrylic acid and poly(N,N-dimethylacrylamide) was applied and irradiated with UV light to give a hydrophilic coating showing pencil hardness 3H and good surface smoothness.  
ST surface grafting active energy ray radiation; photopolymn **initiating** polymer surface grafting UV radiation; radical polymn

- surface grafting UV radiation; tackifier storage stability photochem  
 surface grafting; hydrophilic coating manuf photochem surface grafting;  
 water resistance coating manuf photochem surface grafting; hydrophobic  
 coating manuf photochem surface grafting; antistatic coating manuf  
 photochem surface grafting; anticlouding coating manuf photochem surface  
 grafting
- IT Coating materials  
 (UV-curable; surface grafting treatment by  
 photoirradn. for manufacture of functional coatings)
- IT Polyphosphazenes  
 RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or  
 engineered material use); PREP (Preparation); USES (Uses)  
 (acrylic, graft polymers; surface grafting treatment by photoirradn.  
 for manufacture of functional coatings)
- IT Coating materials  
 (antistatic; surface grafting treatment by photoirradn. for manufacture of  
 functional coatings)
- IT Antifogging agents  
 (coatings; surface grafting treatment by photoirradn. for manufacture of  
 functional coatings)
- IT Coating materials  
 (hydrophilic coatings; surface grafting treatment by photoirradn. for  
 manufacture of functional coatings)
- IT Coating materials  
 (hydrophobic; surface grafting treatment by photoirradn. for manufacture of  
 functional coatings)
- IT Polymerization catalysts  
 (photopolymn., polymeric; surface grafting treatment by photoirradn.  
 for manufacture of functional coatings)
- IT Tackifiers  
 (surface grafting treatment by photoirradn. for manufacture of functional  
 coatings)
- IT Coating materials  
 (water-resistant; surface grafting treatment by photoirradn. for manufacture  
 of functional coatings)
- IT 119-61-9, Benzophenone, uses 77473-08-6, 3,3',4,4'-Tetra(tert-  
 butylperoxycarbonyl)benzophenone 106797-53-9, Irgacure 2959  
 149260-52-6, Esacure KIP 100F  
 RL: CAT (Catalyst use); USES (Uses)  
 (photopolymn. **initiators**; surface grafting treatment by  
 photoirradn. for manufacture of functional coatings)
- IT 215461-75-9P 260397-40-8P 260397-41-9P 260397-42-0P 260397-43-1P  
 RL: CAT (Catalyst use); IMF (Industrial manufacture); PREP (Preparation);  
 USES (Uses)  
 (photopolymn. **initiators**; surface grafting treatment by  
 photoirradn. for manufacture of functional coatings)
- IT 260397-44-2P **260397-45-3P** 260397-46-4P 260397-47-5P  
 260397-48-6P 260397-49-7P 260397-50-0P 260397-51-1P 260397-52-2P  
 260397-53-3P 260397-54-4P  
 RL: IMF (**Industrial manufacture**); PRP (Properties); TEM  
 (Technical or engineered material use); PREP (**Preparation**); USES  
 (Uses)  
 (surface grafting treatment by photoirradn. for manufacture of functional  
 coatings)
- IT 9003-39-8P, Polyvinylpyrrolidone 9011-14-7P, Methyl methacrylate  
 homopolymer 25639-21-8P, Stearyl methacrylate homopolymer 26793-34-0P,  
 N,N-Dimethylacrylamide homopolymer  
 RL: IMF (Industrial manufacture); MOA (Modifier or additive use); PRP

(Properties); PREP (Preparation); USES (Uses)  
 (tackifiers; surface grafting treatment by photoirradn. for manufacture of functional coatings)

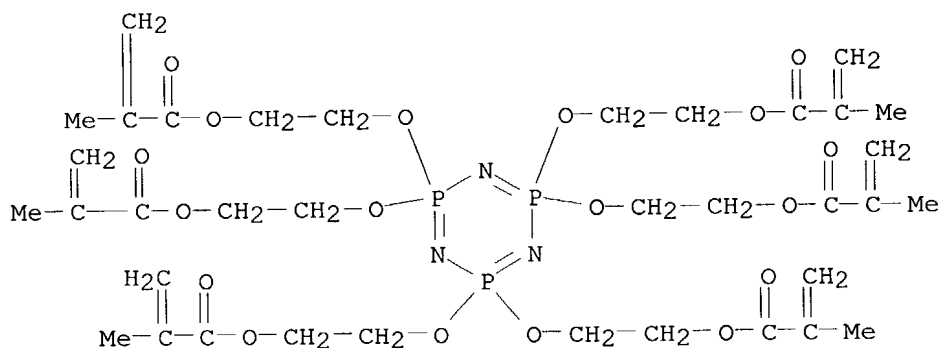
IT 56-81-5, 1,2,3-Propanetriol, uses 9002-89-5, Gohsenol NM 14  
 25618-55-7, Polyglycerin  
 RL: MOA (Modifier or additive use); PRP (Properties); USES (Uses)  
 (tackifiers; surface grafting treatment by photoirradn. for manufacture of functional coatings)

IT **260397-45-3P**  
 RL: **IMF (Industrial manufacture)**; PRP (Properties); TEM  
 (Technical or engineered material use); **PREP (Preparation)**; USES  
 (Uses)  
 (surface grafting treatment by photoirradn. for manufacture of functional coatings)

RN 260397-45-3 HCAPLUS  
 CN 2-Propenoic acid, 3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,10-heptafluorodecyl ester, polymer with 2,2,4,4,6,6-hexahydro-2,2,4,4,6,6-hexakis[2-[(2-methyl-1-oxo-2-propenyl)oxy]ethoxy]-1,3,5,2,4,6-triazatriphosphorine, graft (9CI) (CA INDEX NAME)

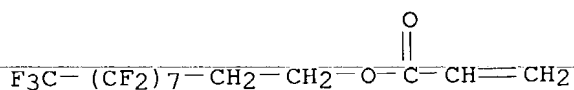
CM 1

CRN 92832-53-6  
 CMF C36 H54 N3 O18 P3



CM 2

CRN 27905-45-9  
 CMF C13 H7 F17 O2



L24 ANSWER 18 OF 27 HCAPLUS COPYRIGHT 2003 ACS on STN  
 AN 1999:814634 HCAPLUS  
 DN 132:50911  
 ED Entered STN: 27 Dec 1999

KATHLEEN FULLER EIC 1700/PARKER LAW 308-4290

TI Manufacture of material with fluoropolymer antireflective film  
IN Morimoto, Yoshihiro; Ito, Tetsuya; Watanabe, Kenji  
PA Nippon Oil and Fats Co., Ltd., Japan  
SO Jpn. Kokai Tokkyo Koho, 9 pp.  
CODEN: JKXXAF

DT Patent

LA Japanese

IC ICM G02B001-11

ICS C09D133-16; C08F220-22

CC 38-3 (Plastics Fabrication and Uses)

Section cross-reference(s): 73

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 11352306	A2	19991224	JP 1999-55361	19990303
PRAI	JP 1998-53008		19980305		

AB The material consists of a substrate and an antireflective film which is formed by applying a **composition** containing CH<sub>2</sub>:CX<sub>1</sub>CO<sub>2</sub>Y<sub>1</sub>OCOCX<sub>2</sub>:CH<sub>2</sub> (X<sub>1</sub>, X<sub>2</sub> = H, Me; Y<sub>1</sub> = C<sub>1</sub>-14 fluoroalkylene involving ≥2 F, C<sub>3</sub>-14 cyclofluoroalkylene involving ≥4 F, CY<sub>2</sub>HCH<sub>2</sub>; Y<sub>2</sub> = C<sub>1</sub>-14 fluoroalkyl involving ≥3 F, C<sub>3</sub>-14 cyclofluoroalkyl involving ≥4 F), a copolymer containing ≥50% CH<sub>2</sub>:CX<sub>3</sub>CO<sub>2</sub>Y<sub>3</sub> (X<sub>3</sub> = H, Me; Y<sub>3</sub> = C<sub>2</sub>-14 fluoroalkyl involving ≥3 F, C<sub>4</sub>-14 fluorocyclalkyl involving ≥4 F), and a photopolymer. **initiator** on ≥1 side and curing. The material is manufactured by applying the above curable **composition** solution on a substrate and **curing** under **UV** irradiation in an inert gas atmospheric. The materials is suitable for parts in display devices, etc. Thus, a solution comprising 1,2-diacryloyloxy-4,4,5,5,6,6,7,7,8,8,9,9,10,10,11,11-heptadecafluoroundecane 10, Bu acrylate-3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,10-heptadecafluorodecyl acrylate copolymer 1, photopolymer. **initiator** (Irgacure 184) 2, and trifluoromethylbenzene 89 parts was applied on 1 side of a PET film by dipping and UV-irradiated in N to give the film showing spectroscopic reflection 0.9%, pencil hardness 2H, and cross-cut adhesion 100/100.

ST **UV cured** fluoropolymer antireflection film material;  
acrylic fluoropolymer antireflection film

IT Coating materials

(**UV-curable**; material having **UV-**

**cured** acrylic fluoropolymer antireflective film)

IT Antireflective films

(material having **UV-cured** acrylic fluoropolymer antireflective film)

IT Polymerization catalysts

(photopolymer.; material having **UV-cured** acrylic fluoropolymer antireflective film)

IT Polyesters, uses

RL: TEM (Technical or engineered material use); USES (Uses)

(substrate film, HLW; material having **UV-cured** acrylic fluoropolymer antireflective film)

IT Polycarbonates, uses

RL: TEM (Technical or engineered material use); USES (Uses)

(substrate film; material having **UV-cured** acrylic fluoropolymer antireflective film)

IT 27775-58-2P

RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(intermediate layer with high n; material having **UV-cured** acrylic fluoropolymer antireflective film)

IT 164231-41-8P  
 RL: IMF (Industrial manufacture); POF (Polymer in formulation);  
 TEM (Technical or engineered material use); PREP (Preparation);  
 USES (Uses)  
 (material having UV-cured acrylic fluoropolymer  
 antireflective film)

IT 88233-95-8  
 RL: POF (Polymer in formulation); TEM (Technical or engineered material  
 use); USES (Uses)  
 (material having UV-cured acrylic fluoropolymer  
 antireflective film)

IT 947-19-3, Irgacure 184  
 RL: CAT (Catalyst use); USES (Uses)  
 (polymerization initiator; material having UV-  
 cured acrylic fluoropolymer antireflective film)

IT 25038-59-9, HLW, uses  
 RL: TEM (Technical or engineered material use); USES (Uses)  
 (substrate film, HLW; material having UV-cured  
 acrylic fluoropolymer antireflective film)

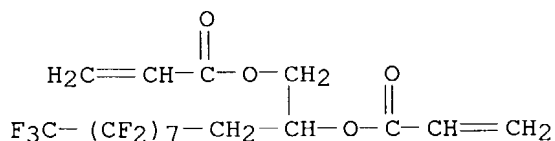
IT 252769-78-1  
 RL: TEM (Technical or engineered material use); USES (Uses)  
 (underlayer; material having UV-cured acrylic  
 fluoropolymer antireflective film)

IT 164231-41-8P  
 RL: IMF (Industrial manufacture); POF (Polymer in formulation);  
 TEM (Technical or engineered material use); PREP (Preparation);  
 USES (Uses)  
 (material having UV-cured acrylic fluoropolymer  
 antireflective film)

RN 164231-41-8 HCAPLUS  
 CN 2-Propenoic acid, 1-(2,2,3,3,4,4,5,5,6,6,7,7,8,8,9,9,9-  
 heptafluorononyl)-1,2-ethanediyl ester, homopolymer (9CI) (CA INDEX  
 NAME)

CM 1

CRN 147187-58-4  
 CMF C17 H11 F17 O4



L24 ANSWER 19 OF 27 HCAPLUS COPYRIGHT 2003 ACS on STN  
 AN 1999:802860 HCAPLUS  
 DN 132:36803  
 ED Entered STN: 21 Dec 1999  
 TI Ultraviolet radiation-curable resin  
 compositions and cured resins  
 IN Taniguchi, Nobuo; Yokojima, Minoru  
 PA Nippon Kayaku Co., Ltd., Japan  
 SO Jpn. Kokai Tokkyo Koho, 8 pp.  
 CODEN: JKXXAF

DT Patent  
 LA Japanese  
 IC ICM C08F290-06  
 ICS C03C025-02; C08F299-06; C09D175-16; C08G018-67  
 CC 38-3 (Plastics Fabrication and Uses)  
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 11349646	A2	19991221	JP 1998-164503	19980612
PRAI	JP 1998-164503		19980612		

AB Resin compns. useful for claddings on optical fibers contain photopolymn. **initiators** and urethane (meth)acrylates prepared from F-containing polyols, organic polyisocyanates, and OH-containing (meth)acrylates. Thus, films were prepared from a urethane acrylate prepared from Fomblen ZDOL TX 2000, trimethylhexamethylene diisocyanate, 3-(perfluorohexy)propenoxide acrylate 40, 1H,1H-perfluoro-n-octyl acrylate 30, 1H,1H,8H,8H-perfluoro-1,8-octanediol diacrylate 30, and 1-hydroxycyclohexyl Ph ketone 1 part.

ST UV crosslinking urethane acrylate; cladding optical fiber **UV curable** resin

IT Coating materials  
 Optical fibers  
 UV radiation  
 (UV-curable urethane (meth)acrylates for claddings on optical fibers)

IT Polyurethanes, uses  
 RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
 (acrylates, fluorine-containing; **UV-curable** urethane (meth)acrylates for claddings on optical fibers)

IT Crosslinking catalysts  
 (photochem.; **UV-curable** urethane (meth)acrylates for claddings on optical fibers)

IT Fluoropolymers, uses  
 RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
 (urethane acrylate; **UV-curable** urethane (meth)acrylates for claddings on optical fibers)

IT 947-19-3, 1-Hydroxycyclohexyl phenyl ketone  
 RL: CAT (Catalyst use); USES (Uses)  
 (UV-curable urethane (meth)acrylates for claddings on optical fibers)

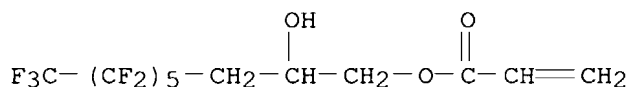
IT **252652-80-5P 252652-87-2P 252669-72-0P**  
 RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
 (UV-curable urethane (meth)acrylates for claddings on optical fibers)

IT 146955-22-8P **252652-78-1P**, Fomblen ZDOL TX 2000-3-(perfluorohexy)propenoxide acrylate-trimethylhexamethylene diisocyanate copolymer **252652-83-8P**  
 RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)  
 (UV-curable urethane (meth)acrylates for claddings on optical fibers)

IT 79-10-7, 2-Propenoic acid, reactions 38565-52-5  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (UV-curable urethane (meth)acrylates for claddings



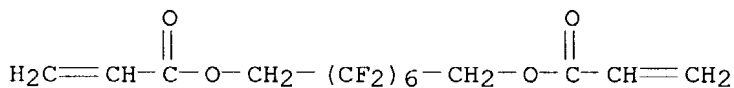
on optical fibers)  
 IT 252652-80-5P 252652-87-2P 252669-72-0P  
 RL: IMF (Industrial manufacture); PRP (Properties); TEM  
 (Technical or engineered material use); PREP (Preparation); USES  
 (Uses)  
 (UV-curable urethane (meth)acrylates for claddings  
 on optical fibers)  
 RN 252652-80-5 HCAPLUS  
 CN 2-Propenoic acid, 2,2,3,3,4,4,5,5,6,6,7,7-dodecafluoro-1,8-octanediyl  
 ester, polymer with 1,6-diisocyanatotrimethylhexane, Fomblin Z-DOL 2000TX,  
 2,2,3,3,4,4,5,5,6,6,7,7,8,8,8-pentadecafluorooctyl 2-propenoate and  
 4,4,5,5,6,6,7,7,8,8,9,9,9-tridecafluoro-2-hydroxynonyl 2-propenoate (9CI)  
 (CA INDEX NAME)  
 CM 1  
 CRN 146955-22-8  
 CMF C12 H9 F13 O3



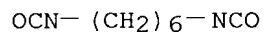
CM 2  
 CRN 130730-70-0  
 CMF Unspecified  
 CCI PMS, MAN

\*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE \*\*\*

CM 3  
 CRN 127194-99-4  
 CMF C14 H10 F12 O4



CM 4  
 CRN 28679-16-5  
 CMF C11 H18 N2 O2  
 CCI IDS

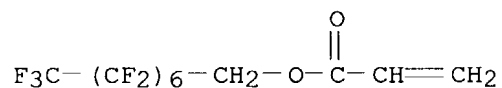


3 ( D1-Me )

CM 5

CRN 307-98-2

CMF C11 H5 F15 O2



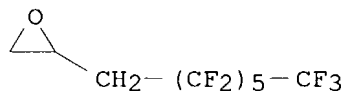
RN 252652-87-2 HCAPLUS

CN Dodecanedioic acid, eicosafluoro-, polymer with  
2,2,3,3,4,4,5,5,6,6,7,7,8,8,8-pentadecafluorooctyl 2-propenoate and  
(2,2,3,3,4,4,5,5,6,6,7,7,7-tridecafluoroheptyl)oxirane (9CI) (CA INDEX  
NAME)

CM 1

CRN 38565-52-5

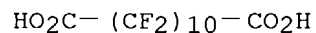
CMF C9 H5 F13 O



CM 2

CRN 865-85-0

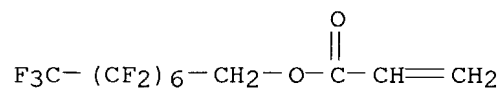
CMF C12 H2 F20 O4



CM 3

CRN 307-98-2

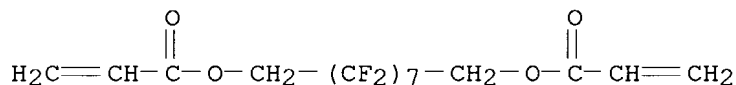
CMF C11 H5 F15 O2



RN 252669-72-0 HCAPLUS  
 CN Dodecanedioic acid, eicosafluoro-, polymer with pentadecafluorodecyl  
 2-propenoate, 2,2,3,3,4,4,5,5,6,6,7,7,8,8,8-pentadecafluorooctyl  
 2-propenoate, 2,2,3,3,4,4,5,5,6,6,7,7,8,8-tetradecafluoro-1,9-nonanediyl  
 di-2-propenoate (2,2,3,3,4,4,5,5,6,6,7,7,7-tridecafluoroheptyl) oxirane  
 (9CI) (CA INDEX NAME)

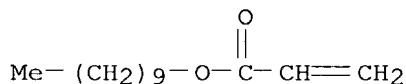
CM 1

CRN 252669-71-9  
 CMF C15 H10 F14 O4



CM 2

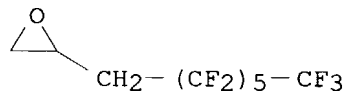
CRN 252669-70-8  
 CMF C13 H9 F15 O2  
 CCI IDS



15 ( D1-F )

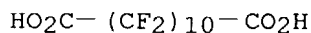
CM 3

CRN 38565-52-5  
 CMF C9 H5 F13 O



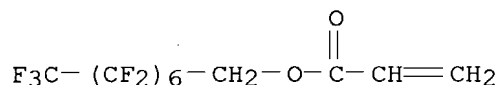
CM 4

CRN 865-85-0  
 CMF C12 H2 F20 O4



CM 5

CRN 307-98-2  
CMF C11 H5 F15 O2



IT **252652-78-1P**, Fomblen ZDOL TX 2000-3-(perfluorohexy)propenoxide  
acrylate-trimethylhexamethylene diisocyanate copolymer

**252652-83-8P**

RL: **IMF (Industrial manufacture)**; RCT (Reactant); **PREP**

**(Preparation)**; RACT (Reactant or reagent)

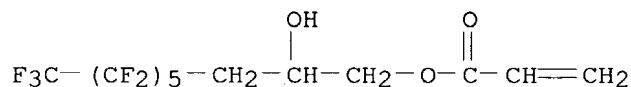
(**UV-curable** urethane (meth)acrylates for claddings  
on optical fibers)

RN 252652-78-1 HCAPLUS

CN 2-Propenoic acid, 4,4,5,5,6,6,7,7,8,8,9,9,9-tridecafluoro-2-hydroxynonyl  
ester, polymer with 1,6-diisocyanatotrimethylhexane and Fomblin Z-DOL  
2000TX (9CI) (CA INDEX NAME)

CM 1

CRN 146955-22-8  
CMF C12 H9 F13 O3



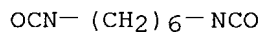
CM 2

CRN 130730-70-0  
CMF Unspecified  
CCI PMS, MAN

\*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE \*\*\*

CM 3

CRN 28679-16-5  
CMF C11 H18 N2 O2  
CCI IDS

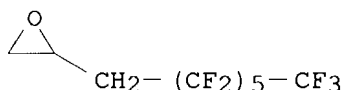


3 ( D1-Me )

RN 252652-83-8 HCAPLUS  
 CN Dodecanedioic acid, eicosafuoro-, polymer with (2,2,3,3,4,4,5,5,6,6,7,7,7-tridecafluoroheptyl)oxirane (9CI) (CA INDEX NAME)

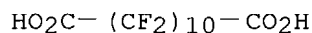
CM 1

CRN 38565-52-5  
 CMF C9 H5 F13 O



CM 2

CRN 865-85-0  
 CMF C12 H2 F20 O4



L24 ANSWER 20 OF 27 HCAPLUS COPYRIGHT 2003 ACS on STN

AN 1999:156779 HCAPLUS

DN 130:253778

ED Entered STN: 10 Mar 1999

TI **UV-curable** coating **compositions** and coated substrates therewith

IN Kondo, Satoshi; Higuchi, Toshihiko

PA Asahi Glass Co., Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 16 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

IC ICM C09D004-06

ICS B05D007-24; B32B027-30; B32B027-36; C08F259-08; C08J007-04;

C09D005-00; C09D127-22; C09D151-00

CC 42-10 (Coatings, Inks, and Related Products)

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 11060992	A2	19990305	JP 1997-226740	19970822
PRAI	JP 1997-226740		19970822		

AB The **UV-curable** compns. contain (a) **UV-curable** components composed of (a-1) 20-100 weight% F-containing copolymers having number-average mol. weight (Mn) 8000-500,000 and constituted

of  
 (i) fluoroolefin-based polymer units 20-70, (ii) polymer units having **UV-curable** functional groups 1-80, and (iii) other polymer units 0-70 mol%, the sum of the polymer units i and ii being ≥30 mol%, and (a-2) 0-80 weight% compds. having **UV-curable** functional groups other than a-1, (b) colloidal SiO<sub>2</sub>, and (c) photopolymn. **initiators**. Substrates coated with the cured films of the compns. and having excellent scratch, abrasion, and weather

resistance are also claimed. Thus, 17.1 g 2-(methacryloyloxy)ethyl isocyanate was treated with 50.0:40.0:10.0 (mol) tetrafluoroethylene-Et vinyl ether-4-hydroxybutyl vinyl ether copolymer with Mn 16,000 at 40° in acetone containing hydroquinone monomethyl ether and Sn dioctylate to give a photopolymerizable fluoropolymer. A solvent solution containing 30.0 g of the fluoropolymer, 54.5 g colloidal SiO<sub>2</sub> treated with 3-(mercapto)propyltrimethoxysilane, 450 mg 1-hydroxycyclohexyl Ph ketone, 1.5 g 2-(3,5-di-tert-amyl-2-hydroxyphenyl)benzotriazole, 600 mg bis(1-octyloxy-2,2,6,6-tetramethyl-4-piperidinyl) sebacate, and a leveling agent (BYK 306) was sprayed onto a transparent aromatic polycarbonate plate, left for 5 min at 80°, and exposed to UV to give a 5-μm transparent coating having haze 0.3%, cross-cut adhesion 100/100, and excellent resistance to abrasion and weathering.

- ST fluoropolymer **UV curable** coating weather resistance;  
transparency **UV curable** coating fluoroolefin  
copolymer; abrasion resistance **UV curable** coating  
fluoropolymer; colloidal silica fluoropolymer coating hardness  
weatherability; polycarbonate substrate **UV curable**  
fluoropolymer coating; fluoroethylene copolymer **UV**  
**curable** coating hardness; methacryloyloxy ethyl isocyanate polymer  
photocurable coating
- IT Coating materials  
(**UV-curable**; silica-containing **UV-**  
**curable** coating compns. with excellent abrasion and weather  
resistance and transparency, for plastic substrates)
- IT Coating materials  
(abrasion-resistant; silica-containing **UV-curable**  
coating compns. with excellent abrasion and weather resistance and  
transparency, for plastic substrates)
- IT Polycarbonates, miscellaneous  
RL: MSC (Miscellaneous)  
(aromatic, substrates; silica-containing **UV-curable**  
coating compns. with excellent abrasion and weather resistance and  
transparency, for plastic substrates)
- IT Polyesters, uses  
Polyoxyalkylenes, uses  
Polyoxyalkylenes, uses  
RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or  
engineered material use); PREP (Preparation); USES (Uses)  
(fluorine-containing; silica-containing **UV-curable** coating  
compns. with excellent abrasion and weather resistance and  
transparency, for plastic substrates)
- IT Fluoropolymers, uses  
RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or  
engineered material use); PREP (Preparation); USES (Uses)  
(methacrylate-terminated; silica-containing **UV-curable**  
coating compns. with excellent abrasion and weather resistance and  
transparency, for plastic substrates)
- IT Polyesters, uses  
RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or  
engineered material use); PREP (Preparation); USES (Uses)  
(perfluoro; silica-containing **UV-curable** coating  
compns. with excellent abrasion and weather resistance and  
transparency, for plastic substrates)
- IT Polymerization catalysts  
(photopolymn.; silica-containing **UV-curable** coating  
compns. with excellent abrasion and weather resistance and  
transparency, for plastic substrates)

- IT Fluoropolymers, uses  
Fluoropolymers, uses  
RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(polyester-; silica-containing **UV-curable** coating  
comps. with excellent abrasion and weather resistance and  
transparency, for plastic substrates)
- IT Fluoropolymers, uses  
Fluoropolymers, uses  
RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(polyoxyalkylene-; silica-containing **UV-curable** coating  
comps. with excellent abrasion and weather resistance and  
transparency, for plastic substrates)
- IT Coating materials  
(transparent; silica-containing **UV-curable** coating  
comps. with excellent abrasion and weather resistance and  
transparency, for plastic substrates)
- IT Coating materials  
(weather-resistant; silica-containing **UV-curable**  
coating comps. with excellent abrasion and weather resistance and  
transparency, for plastic substrates)
- IT 7631-86-9, Silica, uses  
RL: MOA (Modifier or additive use); USES (Uses)  
(silane coupling agent-treated; silica-containing **UV-curable** coating comps. with excellent abrasion and weather  
resistance and transparency, for plastic substrates)
- IT 947-19-3, 1-Hydroxycyclohexyl phenyl ketone  
RL: CAT (Catalyst use); USES (Uses)  
(silica-containing **UV-curable** coating comps. with  
excellent abrasion and weather resistance and transparency, for plastic  
substrates)
- IT 30674-80-7DP, 2-(Methacryloyloxy)ethyl isocyanate, reaction products with  
hydroxy-containing fluoro polymers **88795-11-3DP**, reaction products  
with (methacryloyloxy)ethyl isocyanate **88795-12-4DP**, reaction  
products with (methacryloyloxy)ethyl isocyanate **98714-02-4DP**,  
Ethyl vinyl ether-4-hydroxybutyl vinyl ether-tetrafluoroethylene  
copolymer, reaction products with (methacryloyloxy)ethyl isocyanate  
**98728-78-0DP**, Chlorotrifluoroethylene-ethyl vinyl  
ether-4-hydroxybutyl vinyl ether copolymer, reaction products with  
(methacryloyloxy)ethyl isocyanate **221553-64-6P**  
**221630-33-7P**  
RL: **IMF (Industrial manufacture)**; PRP (Properties); TEM  
(Technical or engineered material use); **PREP (Preparation)**; USES  
(Uses)  
(silica-containing **UV-curable** coating comps. with  
excellent abrasion and weather resistance and transparency, for plastic  
substrates)
- IT **88795-11-3DP**, reaction products with (methacryloyloxy)ethyl  
isocyanate **88795-12-4DP**, reaction products with  
(methacryloyloxy)ethyl isocyanate **98714-02-4DP**, Ethyl vinyl  
ether-4-hydroxybutyl vinyl ether-tetrafluoroethylene copolymer, reaction  
products with (methacryloyloxy)ethyl isocyanate **98728-78-0DP**,  
Chlorotrifluoroethylene-ethyl vinyl ether-4-hydroxybutyl vinyl ether  
copolymer, reaction products with (methacryloyloxy)ethyl isocyanate  
**221553-64-6P 221630-33-7P**  
RL: **IMF (Industrial manufacture)**; PRP (Properties); TEM  
(Technical or engineered material use); **PREP (Preparation)**; USES

(Uses)

(silica-containing **UV-curable** coating compns. with excellent abrasion and weather resistance and transparency, for plastic substrates)

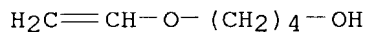
RN 88795-11-3 HCAPLUS

CN 1-Butanol, 4-(ethenyloxy)-, polymer with (ethenyloxy)cyclohexane, ethoxyethene and tetrafluoroethene (9CI) (CA INDEX NAME)

CM 1

CRN 17832-28-9

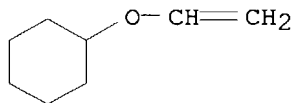
CMF C6 H12 O2



CM 2

CRN 2182-55-0

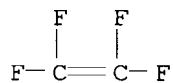
CMF C8 H14 O



CM 3

CRN 116-14-3

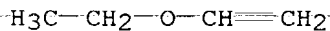
CMF C2 F4



CM 4

CRN 109-92-2

CMF C4 H8 O



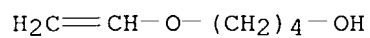
RN 88795-12-4 HCAPLUS

CN 1-Butanol, 4-(ethenyloxy)-, polymer with chlorotrifluoroethene, (ethenyloxy)cyclohexane and ethoxyethene (9CI) (CA INDEX NAME)

CM 1

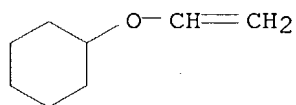


CRN 17832-28-9  
CMF C6 H12 O2



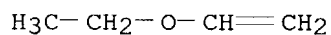
CM 2

CRN 2182-55-0  
CMF C8 H14 O



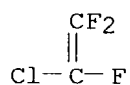
CM 3

CRN 109-92-2  
CMF C4 H8 O



CM 4

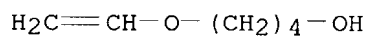
CRN 79-38-9  
CMF C2 Cl F3



RN 98714-02-4 HCAPLUS  
CN 1-Butanol, 4-(ethenyloxy)-, polymer with ethoxyethene and tetrafluoroethene (9CI) (CA INDEX NAME)

CM 1

CRN 17832-28-9  
CMF C6 H12 O2



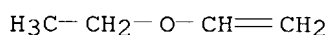
CM 2

CRN 116-14-3  
CMF C2 F4



CM 3

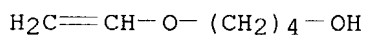
CRN 109-92-2  
CMF C4 H8 O



RN 98728-78-0 HCAPLUS  
CN 1-Butanol, 4-(ethenyloxy)-, polymer with chlorotrifluoroethene and ethoxyethene (9CI) (CA INDEX NAME)

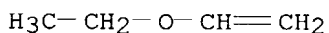
CM 1

CRN 17832-28-9  
CMF C6 H12 O2



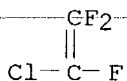
CM 2

CRN 109-92-2  
CMF C4 H8 O



CM 3

CRN 79-38-9  
CMF C2 Cl F3



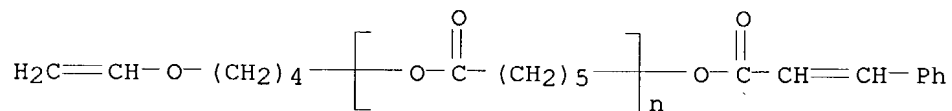
RN 221553-64-6 HCAPLUS  
CN Poly[oxy(1-oxo-1,6-hexanediyl)],  $\alpha$ -[4-(ethenyloxy)butyl]- $\omega$ -[(1-oxo-3-phenyl-2-propenyl)oxy]-, polymer with chlorotrifluoroethene and ethoxyethene (9CI) (CA INDEX NAME)

CM 1

CRN 221553-63-5

CMF (C6 H10 O2)n C15 H18 O3

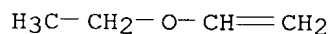
CCI PMS



CM 2

CRN 109-92-2

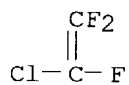
CMF C4 H8 O



CM 3

CRN 79-38-9

CMF C2 Cl F3



RN 221630-33-7 HCAPLUS

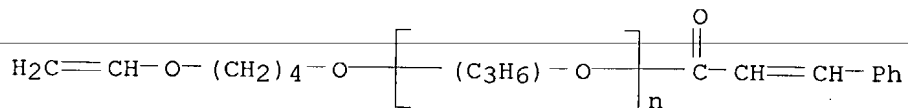
CN Poly[oxy(methyl-1,2-ethanediyl)], α-(1-oxo-3-phenyl-2-propenyl)-ω-[4-(ethenyloxy)butoxy]-, polymer with chlorotrifluoroethene and ethoxyethene (9CI) (CA INDEX NAME)

CM 1

CRN 221630-32-6

CMF (C3 H6 O)n C15 H18 O3

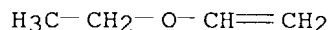
CCI IDS, PMS



CM 2

CRN 109-92-2

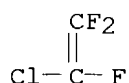
CMF C4 H8 O



CM 3

CRN 79-38-9

CMF C2 C1 F3



L24 ANSWER 21 OF 27 HCAPLUS COPYRIGHT 2003 ACS on STN  
 AN 1998:745023 HCAPLUS  
 DN 130:14981  
 ED Entered STN: 24 Nov 1998  
 TI Fluorinated sulfonamide and sulfone derivatives  
 IN Hamrock, Steven J.; Pham, Phat Tan  
 PA Minnesota Mining and Manufacturing Co., USA  
 SO PCT Int. Appl., 68 pp.  
 CODEN: PIXXD2  
 DT Patent  
 LA English  
 IC ICM C07C311-48  
 ICS C07C311-51; C07D303-34; C07C317-14  
 CC 42-10 (Coatings, Inks, and Related Products)  
 FAN.CNT 4

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9850349	A1	19981112	WO 1997-US17244	19970925
	W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
	RW: GH, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG				
	AU 9745949	A1	19970925	AU 1997-45949	19970925
	EP 980353	A1	20000223	EP 1997-944461	19970925
	EP 980353	B1	20030604		
	R: DE, FR, IT				
	JP 2001526653	T2	20011218	JP 1998-548024	19970925
PRAI	US 1997-847206	A	19970501		
	WO 1997-US17244	W	19970925		
OS	MARPAT 130:14981				
AB	Comps. capable of being coated onto a substrate with electrostatic assistance comprise cationically polymerizable monomer(s) and cationic initiator(s) and contain fluorinated sulfonamide and sulfone derivs. as nonvolatile conductivity enhancers having anionic and cationic portions which are soluble in the monomer(s) and which do not interfere with				

cationic polymerization when the anionic portion is a noncoordinating C-containing anion. The compns. may further comprise dissociation enhancing agent(s), oligomer(s) or polymer(s), preferably co-reactive, free-radically curable monomer(s), free-radical generating **initiator**(s), leveling agents, and other additives or adjuvants to impart specific properties to the polymerized **composition**. Thus, addition of 3.5% LiN(SO<sub>2</sub>CF<sub>3</sub>)<sub>2</sub> to a **curable** mixture of UV 9300 (epoxy silicone) 25, limonene 75, and GE 9380C (UV **initiator**) 3 g reduced the resistance from too high to measure to 893 kΩ, in the preferred range for electrostatic spraying. After being sprayed onto a substrate the **composition** was polymerized by UV irradiation to give a release coating.

ST fluorinated sulfonamide cond enhancer electrostatic coating

IT Ionic conductors  
(fluorinated sulfonamide and sulfone derivs. as conductivity enhancers for electrostatic spray coating)

IT Electrostatic deposition  
Electrostatic deposition  
Electrostatic deposition  
(spray; conductivity enhancers for electrostatic spray coating)

IT 79060-88-1, Sodium tetrakis[3,5-bis(trifluoromethyl)phenyl]borate  
RL: MOA (Modifier or additive use); USES (Uses)  
(conductivity enhancers for electrostatic spray coating)

IT 90076-65-6, Fluorad HQ 115  
RL: MOA (Modifier or additive use); USES (Uses)  
(fluorinated sulfonamide and sulfone derivs. as conductivity enhancers for electrostatic spray coating)

IT 154438-57-0P, Dodecyl vinyl ether-3,6,9,12-tetraoxa-1,13-tetradecadiene copolymer 196958-49-3P, Dimethylsilanediol-limonene-methyl[2-(7-oxabicyclo[4.1.0]hept-3-yl)ethyl]silanediol copolymer  
RL: IMF (Industrial manufacture); PEP (Physical, engineering or chemical process); PREP (Preparation); PROC (Process)  
(fluorinated sulfonamide and sulfone derivs. as conductivity enhancers for electrostatic spray coating of monomers for)

IT 138-86-3, Limonene 17351-75-6, 1,4-Cyclohexanedimethanol divinyl ether  
RL: PEP (Physical, engineering or chemical process); PROC (Process)  
(fluorinated sulfonamide and sulfone derivs. as conductivity enhancers for electrostatic spray coating with)

IT 25610-58-6, Araldite RD 1  
RL: PEP (Physical, engineering or chemical process); POF (Polymer in formulation); PROC (Process); USES (Uses)  
(fluorinated sulfonamide and sulfone derivs. as conductivity enhancers for electrostatic spray coating with)

IT **215815-17-1P** 215815-18-2P 215815-19-3P 215815-20-6P  
215815-22-8P 215815-23-9P 215815-24-0P **215815-26-2P**  
215815-27-3P 215815-28-4P 215815-30-8P 216101-97-2P  
RL: **IMF (Industrial manufacture); PREP (Preparation)**  
(preparation of fluorinated sulfonamide and sulfone derivs.)

IT 210226-98-5P 215815-25-1P  
RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)  
(preparation of fluorinated sulfonamide and sulfone derivs.)

IT 98-09-9, Benzenesulfonyl chloride 124-63-0, Methanesulfonyl chloride  
349-88-2, p-Fluorobenzenesulfonyl chloride 375-72-4,  
Perfluorobutane-1-sulfonyl fluoride 421-85-2,  
Trifluoromethanesulfonamide 428-76-2, Bis(trifluoromethylsulfonyl)methan  
e 754-91-6, Perfluorooctanesulfonamide 814-68-6, Acryloyl chloride  
3406-02-8, Bis(phenylsulfonyl)methane 39864-41-0, Styrenesulfonyl

chloride 78491-70-0 87988-73-6

RL: RCT (Reactant); RACT (Reactant or reagent)

(preparation of fluorinated sulfonamide and sulfone derivs.)

RE.CNT 18 THERE ARE 18 CITED REFERENCES AVAILABLE FOR THIS RECORD  
RE

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- (3) Desmarteau, D; JOURNAL OF FLUORINE CHEMISTRY 1991, V52(1), P7 HCAPLUS
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- (8) Hendrickson, J; JOURNAL OF THE AMERICAN CHEMICAL SOCIETY 1986, V108(9), P2358 HCAPLUS
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- (14) Moore, G; US 3705185 A 1972 HCAPLUS
- (15) Yagupol 'Skii, L; (Arylsulphonyl) (trifluoromethylsulphonyl) methanes 1963, 10
- (16) Yagupol 'Skii, L; RUSSIAN JOURNAL OF ORGANIC CHEMISTRY 1995, V31(5), P691
- (17) Yagupol 'Skii, L; ZH OBSHCH KHIM 1963, V33(3), P920 HCAPLUS
- (18) Zhu, S; JOURNAL OF FLUORINE CHEMISTRY 1993, V64(1-2), P47 HCAPLUS

IT 215815-17-1P 215815-26-2P

RL: IMF (Industrial manufacture); PREP (Preparation)

(preparation of fluorinated sulfonamide and sulfone derivs.)

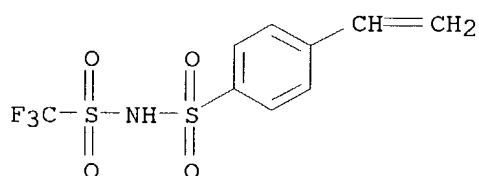
RN 215815-17-1 HCAPLUS

CN Benzenesulfonamide, 4-ethenyl-N-[(trifluoromethyl)sulfonyl]-, lithium salt, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 210226-98-5

CMF C9 H8 F3 N O4 S2 . Li



● Li

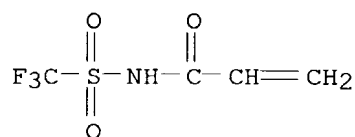
RN 215815-26-2 HCAPLUS

CN 2-Propenamide, N-[(trifluoromethyl)sulfonyl]-, lithium salt, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 215815-25-1

CMF C4 H4 F3 N O3 S . Li



● Li

L24 ANSWER 22 OF 27 HCAPLUS COPYRIGHT 2003 ACS on STN  
 AN 1997:765321 HCAPLUS  
 DN 128:89625  
 ED Entered STN: 08 Dec 1997  
 TI Active energy ray-curable polymer **compositions** for cured products with good transparency, high water contact angle, and low surface free energy  
 IN Haraguchi, Kazutoshi; Imai, Masaru; Sekine, Nobuhiro  
 PA Dainippon Ink and Chemicals, Inc., Japan  
 SO Jpn. Kokai Tokkyo Koho, 8 pp.  
 CODEN: JKXXAF  
 DT Patent  
 LA Japanese  
 IC ICM C08F002-44  
 ICS C08F002-46; C08G063-91; C09D004-06  
 CC 37-6 (Plastics Manufacture and Processing)  
 Section cross-reference(s): 38, 42

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 09309905	A2	19971202	JP 1996-125677	19960521
PRAI	JP 1996-125677		19960521		

AB Title compns. for coatings and sealants comprise (A) 100 parts active energy ray-curable polymers, (B) 0.01-20 parts solvent-soluble and/or hot-melt aromatic polyesters having C≥2 side chains in partial aromatic rings of the main chains, and optionally (C) 0.1-15 parts photoreaction **initiators**. Thus, a solution containing 9EG-A (nonaethylene glycol diacrylate) 10, aromatic polyester [prepared from 0.02 mol pyromellitic acid di(hexadecanyl) ester dichloride and 0.02 mol 4,4'-biphenol] 0.05, Darocur 1173 0.75, and CHCl<sub>3</sub> 27.95 g, was cast on a glass plate, dried, and irradiated with **UV** for **curing** to give a film showing water contact angle 96.1°, surface free energy 34.0 mN/m, haze 3.1, and surface hardness 4.9 g/μm<sup>2</sup>.

ST **UV curable** polymer **compn** transparency;  
 surface hardness contact angle curable polymer; arom polyester curable polymer **compn**

IT Transparent materials  
 Water-resistant materials  
 (active energy ray-curable polymer compns. for cured products with good transparency, high water contact angle, and low surface free energy)  
 IT Polyesters, preparation  
 RL: IMF (Industrial manufacture); POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

- (aromatic; active energy ray-curable polymer compns. for cured products with good transparency, high water contact angle, and low surface free energy)
- IT Coating materials  
(photocurable; active energy ray-curable polymer compns. for cured products with good transparency, high water contact angle, and low surface free energy)
- IT Polymerization catalysts  
(photopolymn.; active energy ray-curable polymer compns. for cured products with good transparency, high water contact angle, and low surface free energy)
- IT Polysiloxanes, preparation  
Polysiloxanes, preparation  
RL: IMF (Industrial manufacture); POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(polyester-, aromatic, graft; active energy ray-curable polymer compns. for cured products with good transparency, high water contact angle, and low surface free energy)
- IT Polyesters, preparation  
Polyesters, preparation  
RL: IMF (Industrial manufacture); POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(polysiloxane-, aromatic, graft; active energy ray-curable polymer compns. for cured products with good transparency, high water contact angle, and low surface free energy)
- IT Coating materials  
(transparent; active energy ray-curable polymer compns. for cured products with good transparency, high water contact angle, and low surface free energy)
- IT Coating materials  
(water-resistant; active energy ray-curable polymer compns. for cured products with good transparency, high water contact angle, and low surface free energy)
- IT 26570-48-9  
RL: POF (Polymer in formulation); PRP (Properties); RCT (Reactant); TEM (Technical or engineered material use); RACT (Reactant or reagent); USES (Uses)  
(9EG-A; active energy ray-curable polymer compns. for cured products with good transparency, high water contact angle, and low surface free energy)
- IT 200810-83-9P **200810-85-1P** 200888-47-7P 200888-48-8P  
200888-49-9P  
RL: **IMF (Industrial manufacture)**; POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); **PREP (Preparation)**; USES (Uses)  
(active energy ray-curable polymer compns. for cured products with good transparency, high water contact angle, and low surface free energy)
- IT 7473-98-5, Darocur 1173  
RL: CAT (Catalyst use); USES (Uses)  
(photoreaction **initiator**; active energy ray-curable polymer compns. for cured products with good transparency, high water contact angle, and low surface free energy)
- IT **200810-85-1P**  
RL: **IMF (Industrial manufacture)**; POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); **PREP (Preparation)**; USES (Uses)



(active energy ray-curable polymer compns. for cured products with good transparency, high water contact angle, and low surface free energy)

RN 200810-85-1 HCAPLUS

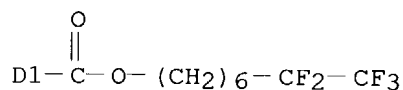
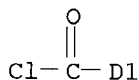
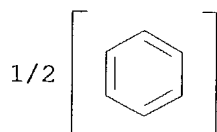
CN Benzenedicarboxylic acid, bis(chlorocarbonyl)-, bis(7,7,8,8,8-pentafluorooctyl) ester, polymer with [1,1'-biphenyl]-4,4'-diol (9CI) (CA INDEX NAME)

CM 1

CRN 200810-84-0

CMF C26 H26 Cl2 F10 O6

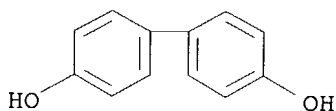
CCI IDS



CM 2

CRN 92-88-6

CMF C12 H10 O2



L24 ANSWER 23 OF 27 HCAPLUS COPYRIGHT 2003 ACS on STN

AN 1996:595816 HCAPLUS

DN 125:222792

ED Entered STN: 05 Oct 1996

TI Unsaturated group- and fluorine-containing active energy beam-sensitive block copolymer **compositions** and their manufacture

IN Yamada, Tsunehisa; Oomura, Hiroshi

PA Nippon Oils & Fats Co Ltd, Japan

SO Jpn. Kokai Tokkyo Koho, 10 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

IC ICM C08F290-00  
 CC 35-4 (Chemistry of Synthetic High Polymers)  
 Section cross-reference(s): 42, 74

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 08193107	A2	19960730	JP 1995-5019	19950117
PRAI	JP 1995-5019		19950117		

AB The comps., useful for resists and coating materials, consists of reactive dilutants and block copolymers comprising (A) OH-containing polymer segments from radically polymerizable monomers containing OH-containing ones and

(B) F-containing polymer segments from F-containing monomers CH<sub>2</sub>:CR<sub>1</sub>COOR<sub>2</sub>R<sub>f</sub>  
 [R<sub>1</sub> =

H, Me; R<sub>2</sub> = C<sub>p</sub>H<sub>2</sub>p, C(C<sub>p</sub>H<sub>2</sub>p+1)H, CH<sub>2</sub>C(C<sub>p</sub>H<sub>2</sub>p+1)H, CH<sub>2</sub>CH<sub>2</sub>O; R<sub>f</sub> = C<sub>n</sub>F<sub>2</sub>n+1, (CF<sub>2</sub>)<sub>n</sub>H, (CF<sub>2</sub>)<sub>p</sub>OC<sub>n</sub>H<sub>2</sub>nCiF<sub>2</sub>i+1, (CF<sub>2</sub>)<sub>p</sub>OC<sub>m</sub>H<sub>2</sub>mCiF<sub>2</sub>iH, N(C<sub>p</sub>H<sub>2</sub>p+1)COC<sub>n</sub>F<sub>2</sub>n+1, N(C<sub>p</sub>H<sub>2</sub>p+1)SO<sub>2</sub>C<sub>n</sub>F<sub>2</sub>n+1; p = 1-10; n = 1-16; m = 0-10; i = 0-16], other F-containing monomers, and other radically polymerizable monomers, in which OH groups are partially reacted with halo-containing monomers R<sub>3</sub>COX (R<sub>3</sub> = CH<sub>2</sub>:CH; CH<sub>2</sub>CHMe; CH<sub>2</sub>:CHCOOC<sub>2</sub>H<sub>4</sub>O, CH<sub>2</sub>:CMeCOOC<sub>2</sub>H<sub>4</sub>O; X = halo). Thus, Me methacrylate 140, hydroxyethyl methacrylate 160, and [CO(CH<sub>2</sub>)<sub>4</sub>COO(C<sub>2</sub>H<sub>4</sub>O)<sub>3</sub>CO(CH<sub>2</sub>)<sub>4</sub>COO]<sub>10</sub> 40 parts were polymerized at 70° for 6 h in a DMF-MEK solvent system, followed by polymerizing with 100 parts CF<sub>3</sub>(CF<sub>2</sub>)<sub>7</sub>CH<sub>2</sub>CH<sub>2</sub>OCHOCH:CH<sub>2</sub> at 70° for 10 h to give a powdered block copolymer, 5 parts of which was then dispersed in 15 parts tetrahydrofurfuryl acrylate containing 2.43 parts pyridine and treated with 0.823 part acryloyl chloride at 50° for 2.5 h to give a **composition** without gelation. The **composition** was **curable** by UV radiation and **cured** product showed good water and oil repellency.

ST block acrylic fluoropolymer unsatd radiation sensitive; water oil repellency block fluoropolymer cured; coating acrylic peroxy block fluoropolymer waterproof; resist UV sensitive block fluoropolymer acrylic  
 IT Fluoropolymers

RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
 (acrylic, block; unsatd. group- and fluorine-containing active energy beam-sensitive block copolymer comps. and their manufacture)

IT Epoxy resins, uses  
 Urethane polymers, uses  
 RL: TEM (Technical or engineered material use); USES (Uses)  
 (acrylic, resist component; unsatd. group- and fluorine-containing active energy beam-sensitive block copolymer comps. and their manufacture)

IT Acrylic polymers, uses  
 RL: TEM (Technical or engineered material use); USES (Uses)  
 (epoxy, resist component; unsatd. group- and fluorine-containing active energy beam-sensitive block copolymer comps. and their manufacture)

IT Coating materials  
 (oil- and water-resistant, unsatd. group- and fluorine-containing active energy beam-sensitive block copolymer comps. and their manufacture)

IT Acrylic polymers, uses  
 RL: TEM (Technical or engineered material use); USES (Uses)  
 (polyurethane-, resist component; unsatd. group- and fluorine-containing active energy beam-sensitive block copolymer comps. and their manufacture)

IT Resists  
 (radiation-sensitive, unsatd. group- and fluorine-containing active energy beam-sensitive block copolymer comps. and their manufacture)

IT 7429-90-5, Aluminum, miscellaneous 9002-86-2, Vinyl chloride homopolymer

RL: MSC (Miscellaneous)  
 (coating substrate; unsatd. group- and fluorine-containing active energy  
 beam-sensitive block copolymer compns. and their manufacture)

IT 83560-34-3  
 RL: CAT (Catalyst use); USES (Uses)  
 (polymerization **initiator**; unsatd. group- and fluorine-containing active  
 energy beam-sensitive block copolymer compns. and their manufacture)

IT 2274-11-5, Ethylene glycol diacrylate 137803-79-3, SP 1506  
 RL: TEM (Technical or engineered material use); USES (Uses)  
 (resist component; unsatd. group- and fluorine-containing active energy  
 beam-sensitive block copolymer compns. and their manufacture)

IT 814-68-6DP, Acryloyl chloride, reaction products with acrylic block  
 fluoropolymers 13695-27-7DP, reaction products with acrylic block  
 fluoropolymers 41892-42-6DP, reaction products with acrylic block  
 fluoropolymers **154965-63-6DP**, reaction products with acrylic  
 halides **181510-46-3DP**, reaction products with acrylic halides  
 RL: **IMF (Industrial manufacture)**; PRP (Properties); TEM  
 (Technical or engineered material use); **PREP (Preparation)**; USES  
 (Uses)  
 (unsatd. group- and fluorine-containing active energy beam-sensitive block  
 copolymer compns. and their manufacture)

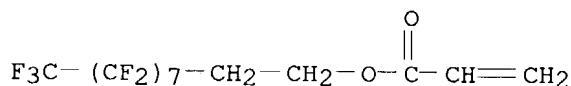
IT **154965-63-6DP**, reaction products with acrylic halides  
**181510-46-3DP**, reaction products with acrylic halides  
 RL: **IMF (Industrial manufacture)**; PRP (Properties); TEM  
 (Technical or engineered material use); **PREP (Preparation)**; USES  
 (Uses)  
 (unsatd. group- and fluorine-containing active energy beam-sensitive block  
 copolymer compns. and their manufacture)

RN 154965-63-6 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, butyl ester, polymer with  
 3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,10-heptafluorodecyl 2-propenoate,  
 2-hydroxyethyl 2-methyl-2-propenoate and methyl 2-methyl-2-propenoate,  
 block (9CI) (CA INDEX NAME)

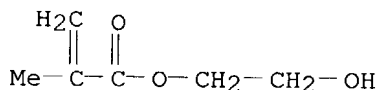
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CRN 27905-45-9  
 CMF C13 H7 F17 O2



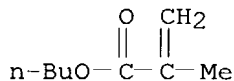
CM 2

CRN 868-77-9  
 CMF C6 H10 O3



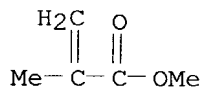
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CRN 97-88-1  
CMF C8 H14 O2



CM 4

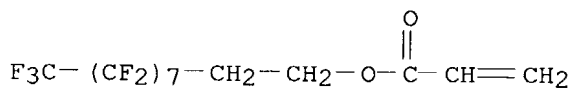
CRN 80-62-6  
CMF C5 H8 O2



RN 181510-46-3 HCAPLUS  
CN 2-Propenoic acid, 2-methyl-, 2-hydroxyethyl ester, polymer with  
3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,10-heptafluorodecyl 2-propenoate,  
methyl 2-methyl-2-propenoate and (tetrahydro-2-furanyl)methyl  
2-propenoate, block (9CI) (CA INDEX NAME)

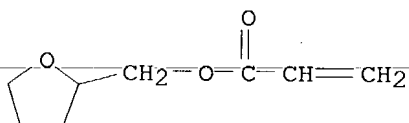
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CRN 27905-45-9  
CMF C13 H7 F17 O2



CM 2

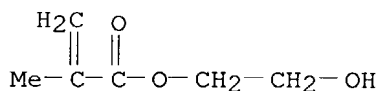
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CMF C8 H12 O3



CM 3

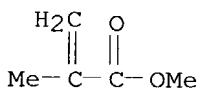
CRN 868-77-9

CMF C6 H10 O3



CM 4

CRN 80-62-6  
CMF C5 H8 O2



L24 ANSWER 24 OF 27 HCAPLUS COPYRIGHT 2003 ACS on STN  
AN 1995:308676 HCAPLUS  
DN 122:83257  
ED Entered STN: 24 Jan 1995  
TI Adhesive tapes for silicon wafer sanding and their use  
IN Takemura, Yasuo; Narimatsu, Osamu; Komatsu, Kazuyoshi; Takeuchi, Yoko  
PA Mitsui Toatsu Chemicals, Japan  
SO Jpn. Kokai Tokkyo Koho, 8 pp.  
CODEN: JKXXAF  
DT Patent  
LA Japanese  
IC ICM H01L021-304  
ICS B24B001-00; C09J007-02  
CC 38-3 (Plastics Fabrication and Uses)  
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 06177094	A2	19940624	JP 1992-330220	19921210
PRAI	JP 1992-330220		19921210		

AB Adhesive tapes consist of one or two layers of transparent films;  
≥1 layer of the films with Shore D hardness ≤40 is coated  
with a photo-curable adhesive **composition** consisting of a C-C double  
bond-containing photo-polymerizable acrylic polymer containing 3-15 weight% of  
fluorine-containing monomers, compds. containing ≥4 (meth)acryloyl group,  
and C-C double bond-containing polymerization **initiator**. The adhesive  
tapes are stuck to the surface of silicon wafers for protection during the  
sanding process. One such adhesive tape consisted of a 70-μm  
ethylene-vinyl acetate copolymer layer (Shore D hardness 30) and a  
40-μm polypropylene layer (Shore D hardness 80); the ethylene-vinyl  
acetate copolymer layer was coated with a **UV-curable**  
adhesive consisting of reaction products of glycidyl (meth)acrylate with  
Et acrylate-2-ethylhexyl acrylate-heptadecafluorodecyl acrylate-Me  
acrylate copolymer, ditrimethylolpropane tetraacrylate, and Uvecryl P36.  
ST adhesive tape silicon wafer sanding  
IT Semiconductor devices  
(adhesive tapes for silicon wafer sanding and their use)  
IT Rubber, butadiene, uses

RL: DEV (Device component use); USES (Uses)  
(adhesive tapes for silicon wafer sanding and their use)

IT Adhesives  
(UV-curable, adhesive tapes for silicon wafer sanding and their use)

IT 9003-07-0, Polypropylene 24937-78-8, Ethylene-vinyl acetate copolymer  
RL: DEV (Device component use); USES (Uses)  
(adhesive tapes for silicon wafer sanding and their use)

IT 106-90-1DP, Glycidyl acrylate, reaction products with fluorine-containing acrylic polymers 106-91-2DP, Glycidyl methacrylate, reaction products with fluorine-containing acrylic polymers **160455-68-5DP**, reaction products with glycidyl (meth)acrylate **160455-69-6DP**, reaction products with glycidyl (meth)acrylate  
RL: **IMF (Industrial manufacture)**; POF (Polymer in formulation); TEM (Technical or engineered material use); **PREP (Preparation)**; USES (Uses)  
(adhesive tapes for silicon wafer sanding and their use)

IT 29570-58-9, Dipentaerythritol hexaacrylate 60506-81-2, Dipentaerythritol pentaacrylate 85340-63-2, Uvecryl P36 94108-97-1, Ditrimehtylolpropane tetraacrylate 110430-09-6  
RL: POF (Polymer in formulation); TEM (Technical or engineered material use); USES (Uses)  
(adhesive tapes for silicon wafer sanding and their use)

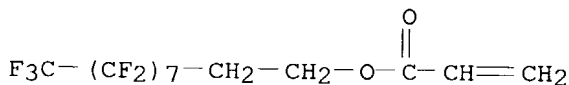
IT 9003-17-2  
RL: DEV (Device component use); USES (Uses)  
(rubber, adhesive tapes for silicon wafer sanding and their use)

IT **160455-68-5DP**, reaction products with glycidyl (meth)acrylate **160455-69-6DP**, reaction products with glycidyl (meth)acrylate  
RL: **IMF (Industrial manufacture)**; POF (Polymer in formulation); TEM (Technical or engineered material use); **PREP (Preparation)**; USES (Uses)  
(adhesive tapes for silicon wafer sanding and their use)

RN 160455-68-5 HCAPLUS  
CN 2-Propenoic acid, ethyl ester, polymer with 2-ethylhexyl 2-propenoate, 3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,10-heptafluorodecyl 2-propenoate and methyl 2-propenoate (9CI) (CA INDEX NAME)

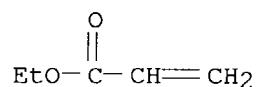
CM 1

CRN 27905-45-9  
CMF C13 H7 F17 O2



CM 2

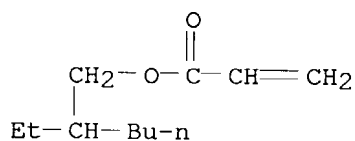
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CMF C5 H8 O2



CM 3

CRN 103-11-7

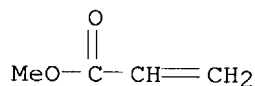
CMF C11 H20 O2



CM 4

CRN 96-33-3

CMF C4 H6 O2



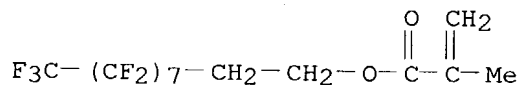
RN 160455-69-6 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, 3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,10-heptafluorodecyl ester, polymer with 2-ethylhexyl 2-propenoate, ethyl 2-propenoate and methyl 2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 1996-88-9

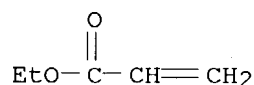
CMF C14 H9 F17 O2



CM 2

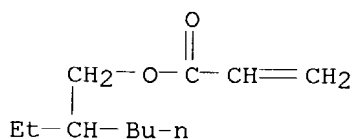
CRN 140-88-5

CMF C5 H8 O2



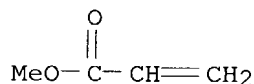
CM 3

CRN 103-11-7  
CMF C11 H20 O2



CM 4

CRN 96-33-3  
CMF C4 H6 O2



L24 ANSWER 25 OF 27 HCAPLUS COPYRIGHT 2003 ACS on STN  
AN 1994:485511 HCAPLUS  
DN 121:85511  
ED Entered STN: 20 Aug 1994  
TI Photocurable fluorine-containing acrylic rubber **compositions**  
IN Nakagome, Seiji  
PA Nok Corp, Japan  
SO Jpn. Kokai Tokkyo Koho, 4 pp.  
CODEN: JKXXAF  
DT Patent  
LA Japanese  
IC ICM C08F220-28  
ICS C08F220-28; C08F299-02  
CC 39-9 (Synthetic Elastomers and Natural Rubber)  
Section cross-reference(s): 42, 73  
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 06065328	A2	19940308	JP 1992-245816	19920821
PRAI	JP 1992-245816		19920821		
AB	The title compns. useful for cladding optical fibers contain copolymers derived from fluorinated alkyl esters of (meth)acrylic acid, allyl (meth)acrylate (I) and (optionally etherified) (meth)acrylate esters of ethylene glycol (II) or its oligomers, crosslinkers selected from I and/or a di(meth)acrylate esters of II or its oligomers, and organic peroxide				



**initiators** and photoinitiators. Thus, 100 parts a polymer of CH<sub>2</sub>:CHCO<sub>2</sub>CH<sub>2</sub>(CF<sub>2</sub>)<sub>4</sub>H 949.5, CH<sub>2</sub>:CMeCO<sub>2</sub>CH<sub>2</sub>CH:CH<sub>2</sub> 15.0, and CH<sub>2</sub>:CMeCO<sub>2</sub>(CH<sub>2</sub>CH<sub>2</sub>O)<sub>2</sub>Me 112.8 parts was mixed with 10 parts CH<sub>2</sub>:CHCO<sub>2</sub>(CH<sub>2</sub>CH<sub>2</sub>O)<sub>4</sub>COCH:CH<sub>2</sub> and 0.5 part Darocur 1173, cast between glass plates, and irradiated with UV light to give a film showing light transmittance 93.5%, tensile strength 54 kg/cm<sup>2</sup>, and elongation 220%.

ST acrylic rubber fluorinated **UV curability**; allyl methacrylate crosslinking acrylic rubber; transparency acrylic rubber optical fiber cladding

IT Optical fibers  
(cladding of, fluorine-containing acrylic rubber compns. for)

IT Transparent materials  
(fluorine-containing acrylic rubbers, for cladding optical fibers)

IT Rubber, synthetic  
RL: IMF (Industrial manufacture); PREP (Preparation)  
(acrylic, fluorine-containing, preparation of, for optical fiber cladding, crosslinkers for)

IT Optical materials  
(films, fluorine-containing acrylic rubber compns. for)

IT 156664-80-1 156664-81-2 156664-82-3  
RL: USES (Uses)  
(cladding of optical fibers with, **UV-curable**)

IT 109-17-1 2358-84-1 17831-71-9  
RL: USES (Uses)  
(crosslinkers, for fluorine-containing acrylic rubbers for cladding optical fibers)

IT 6731-36-8, Perhexa 3M  
RL: USES (Uses)  
(**initiators**, for fluorine-containing acrylic rubbers for cladding optical fibers)

IT 7473-98-5  
RL: USES (Uses)  
(photoinitiators, for fluorine-containing acrylic rubbers for cladding optical fibers)

IT **156664-77-6P 156664-78-7P 156664-79-8P**  
RL: IMF (Industrial manufacture); PREP (Preparation)  
(rubber, preparation of, for optical fiber cladding, crosslinkers for)

IT **156664-77-6P 156664-78-7P 156664-79-8P**  
RL: IMF (Industrial manufacture); PREP (Preparation)  
(rubber, preparation of, for optical fiber cladding, crosslinkers for)

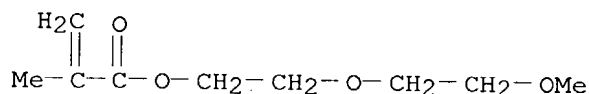
RN 156664-77-6 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, 2-(2-methoxyethoxy)ethyl ester, polymer with 2,2,3,3,4,4,5,5-octafluoropentyl 2-propenoate and 2-propenyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

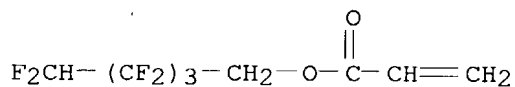
CRN 45103-58-0

CMF C9 H16 O4



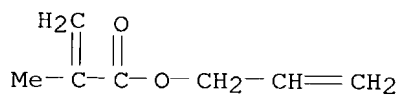
CM 2

CRN 376-84-1  
CMF C8 H6 F8 O2



CM 3

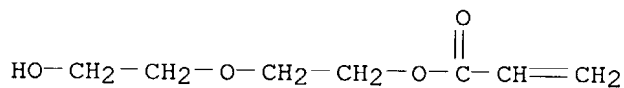
CRN 96-05-9  
CMF C7 H10 O2



RN 156664-78-7 HCAPLUS  
CN 2-Propenoic acid, 2-(2-hydroxyethoxy)ethyl ester, polymer with  
2,2,3,3,4,4,5,5-octafluoropentyl 2-propenoate and 2-propenyl 2-propenoate  
(9CI) (CA INDEX NAME)

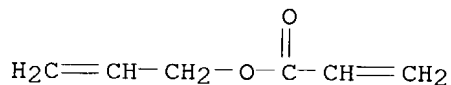
CM 1

CRN 13533-05-6  
CMF C7 H12 O4



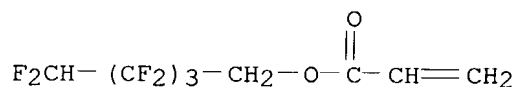
CM 2

CRN 999-55-3  
CMF C6 H8 O2

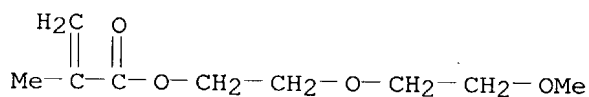


CM 3

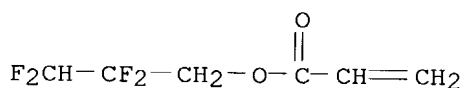
CRN 376-84-1  
CMF C8 H6 F8 O2



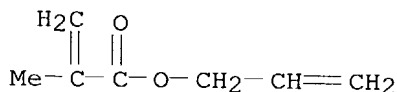
RN 156664-79-8 HCAPLUS  
 CN 2-Propenoic acid, 2-methyl-, 2-(2-methoxyethoxy)ethyl ester, polymer with  
 2-propenyl 2-methyl-2-propenoate and 2,2,3,3-tetrafluoropropyl  
 2-propenoate (9CI) (CA INDEX NAME)  
 CM 1  
 CRN 45103-58-0  
 CMF C9 H16 O4



CM 2  
 CRN 7383-71-3  
 CMF C6 H6 F4 O2



CM 3  
 CRN 96-05-9  
 CMF C7 H10 O2



L24 ANSWER 26 OF 27 HCAPLUS COPYRIGHT 2003 ACS on STN  
 AN 1990:140561 HCAPLUS  
 DN 112:140561  
 ED Entered STN: 13 Apr 1990  
 TI Curable acrylic fluoropolymer **compositions**  
 IN Seko, Kenji; Kataoka, Haruhiko; Iwazawa, Naozumi; Kinaga, Yoshimasa  
 PA Kansai Paint Co., Ltd., Japan  
 SO Jpn. Kokai Tokkyo Koho, 14 pp.  
 CODEN: JKXXAF  
 DT Patent  
 LA Japanese

IC ICM C08F299-00  
 CC 37-6 (Plastics Manufacture and Processing)  
 Section cross-reference(s): 42, 57, 73

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 01223107	A2	19890906	JP 1988-50231	19880302
PRAI	JP 1988-50231		19880302		

AB Curable compns., useful for optical fiber sheaths and coatings, contain H2C:CRCO2(CH2)m(CpF2p)(CH2)mOCOCR:CH2 (I) (R = Me or H; m = 1 or 2; p = 1-12) and double bond-containing polymers prepared from H2C:CRCO2(CX2)m(CF2)nX (R = Me or H; X = F or H; m = 1 or 2; n = 1-12). Thus, heating 60 parts Me iso-Bu ketone and 60 parts m-xylene hexafluoride 60 to 110°, adding 170 parts 1,1,2,2-tetrahydroheptafluorodecyl acrylate and 30 parts glycidyl methacrylate and an **initiator**, and polymerizing gave a polymer. This polymer was heated with hydroquinone 0.1, Et3N 1, and acrylic acid 16 parts at 110° for 5 h to give a resin having number-average mol. weight 16,000. A quartz optical fiber having a **composition** containing this resin 100, I (p = 4, m = 1, R = H) 60, and Daracur 1173 5 parts as the sheath was irradiated by UV to give a product having good weathering resistance and transmission loss 5 dB/km.

ST optical fiber weathering resistance; acrylic fluoropolymer optical fiber sheath; fluorodecyl acrylate copolymer optical fiber; glycidyl methacrylate copolymer optical fiber; **UV curable** sheath optical fiber; coating **UV curable** acrylic fluoropolymer

IT Slate

IT (coatings for, curable acrylic fluoropolymer compns. as)

IT Optical fibers

IT (sheaths for, weather-resistant **UV-cured** acrylic fluoropolymer compns. as)

IT Acrylic polymers, uses and miscellaneous

RL: USES (Uses)

IT (sheets, coatings for, curable acrylic fluoropolymer compns. as)

IT Coating materials

IT (unsatd. acrylic fluoropolymers, containing vinyl crosslinkers, for plastics and inorg. substrates)

IT Fluoropolymers

RL: PREP (Preparation)

IT (acrylic, unsatd., manufacture of, for curable optical fiber sheaths)

IT Acrylic polymers, preparation

RL: PREP (Preparation)

IT (unsatd., fluorine-containing, manufacture of, for curable optical fiber sheaths)

IT 25038-59-9, uses and miscellaneous

RL: USES (Uses)

IT (films, coatings for, curable acrylic fluoropolymer compns. as)

IT 818-61-1DP, carbamates with hydroxyethyl methacrylate-IPDI adduct-octafluoropentyl acrylate copolymer 54554-39-1DP, carbamates with heptafluorodecyl acrylate-hydroxyethyl methacrylate copolymers 78724-20-6DP, carbamates with hydroxyethyl acrylate-tetrafluoropropyl acrylate copolymers **113190-41-3DP**, carbamates with hydroxyethyl acrylate-TDI adducts **118256-10-3DP**, carbamates with hydroxyethyl acrylate-isophorone diisocyanate adducts **118277-41-1P** **118277-42-2P** **118277-43-3P** **118277-44-4P** **118277-45-5P** **118333-73-6DP**, carbamates with hydroxyethyl acrylate **118367-06-9P** **118367-07-0P**

RL: **PREP (Preparation)**

(manufacture of curable, for optical-fiber sheaths and coatings)

IT 125635-54-3P 125635-56-5P 125635-57-6P  
 125635-58-7P 125635-59-8P 125635-60-1P  
 125635-61-2P 125649-69-6P 125874-37-5P  
 RL: PREP (Preparation)  
 (manufacture of, as UV-cured weather-resistant optical  
 fiber sheaths)

IT 125658-82-4P  
 RL: PREP (Preparation)  
 (manufacture of, as coating for ABS polymer sheet)

IT 125658-78-8P  
 RL: PREP (Preparation)  
 (manufacture of, as coating for PET film)

IT 125658-79-9P  
 RL: PREP (Preparation)  
 (manufacture of, as coating for acrylic sheet)

IT 125658-81-3P  
 RL: PREP (Preparation)  
 (manufacture of, as coating for slate)

IT 9003-56-9  
 RL: USES (Uses)  
 (sheets, coatings for, curable acrylic fluoropolymer compns. as)

IT 113190-41-3DP, carbamates with hydroxyethyl acrylate-TDI adducts  
 118256-10-3DP, carbamates with hydroxyethyl acrylate-isophorone  
 diisocyanate adducts 118277-41-1P 118277-42-2P  
 118277-43-3P 118277-44-4P 118277-45-5P  
 118333-73-6DP, carbamates with hydroxyethyl acrylate  
 118367-06-9P 118367-07-0P  
 RL: PREP (Preparation)  
 (manufacture of curable, for optical-fiber sheaths and coatings)

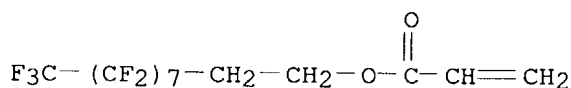
RN 113190-41-3 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, 2-hydroxyethyl ester, polymer with  
 3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,10-heptadecafluorodecyl 2-propenoate  
 (9CI) (CA INDEX NAME)

CM 1

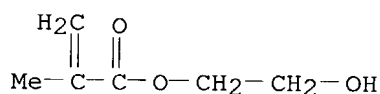
CRN 27905-45-9

CMF C13 H7 F17 O2



CM 2

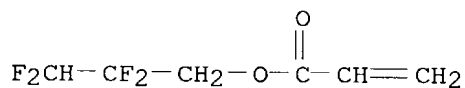
CRN 868-77-9  
 CMF C6 H10 O3



RN 118256-10-3 HCAPLUS  
 CN 2-Propenoic acid, 2-methyl-, 2-hydroxyethyl ester, polymer with  
 2,2,3,3-tetrafluoropropyl 2-propenoate (9CI) (CA INDEX NAME)

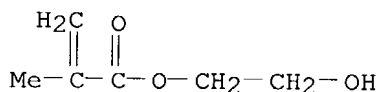
CM 1

CRN 7383-71-3  
 CMF C6 H6 F4 O2



CM 2

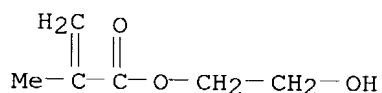
CRN 868-77-9  
 CMF C6 H10 O3



RN 118277-41-1 HCAPLUS  
 CN 2-Propenoic acid, polymer with 3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,10-  
 heptafluorodecyl 2-propenoate, 2-[(2-methyl-1-oxo-2-propenyl)oxy]ethyl  
 ester (9CI) (CA INDEX NAME)

CM 1

CRN 868-77-9  
 CMF C6 H10 O3

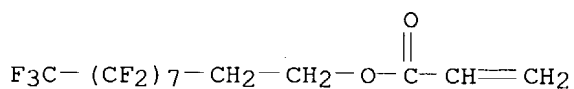


CM 2

CRN 186905-98-6  
 CMF (C13 H7 F17 O2 . C3 H4 O2)x  
 CCI PMS

CM 3

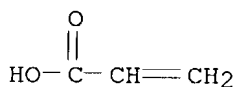
CRN 27905-45-9  
 CMF C13 H7 F17 O2



CM 4

CRN 79-10-7

CMF C3 H4 O2



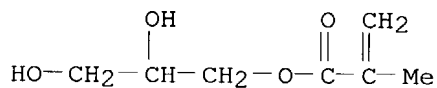
RN 118277-42-2 HCAPLUS

CN 2-Propenoic acid, polymer with 3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,10-heptafluorodecyl 2-propenoate, 2-hydroxy-3-[(2-methyl-1-oxo-2-propenyl)oxy]propyl ester (9CI) (CA INDEX NAME)

CM 1

CRN 5919-74-4

CMF C7 H12 O4



CM 2

CRN 186905-98-6

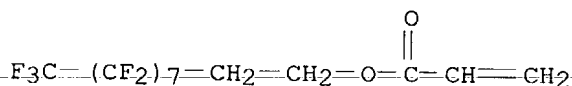
CMF (C13 H7 F17 O2 . C3 H4 O2)x

CCI PMS

CM 3

CRN 27905-45-9

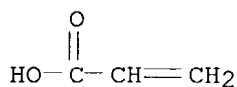
CMF C13 H7 F17 O2



CM 4

CRN 79-10-7

CMF C3 H4 O2

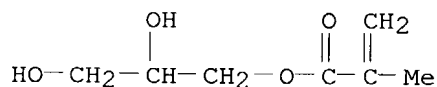


RN 118277-43-3 HCAPLUS  
 CN 2-Propenoic acid, polymer with 3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,10-heptafluorodecyl 2-propenoate and 2,2,3,3,4,4,5,5-octafluoropentyl 2-propenoate, 2-hydroxy-3-[(2-methyl-1-oxo-2-propenyl)oxy]propyl ester (9CI) (CA INDEX NAME)

CM 1

CRN 5919-74-4

CMF C7 H12 O4



CM 2

CRN 265664-90-2

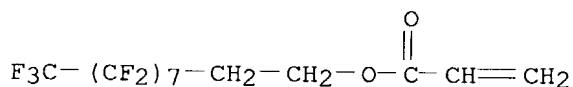
CMF (C13 H7 F17 O2 . C8 H6 F8 O2 . C3 H4 O2)x

CCI PMS

CM 3

CRN 27905-45-9

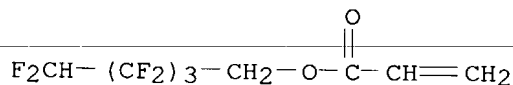
CMF C13 H7 F17 O2



CM 4

CRN 376-84-1

CMF C8 H6 F8 O2

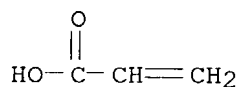


CM 5

CRN 79-10-7

CMF C3 H4 O2

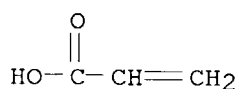




RN 118277-44-4 HCAPLUS  
 CN 2-Propenoic acid, 2-methyl-, oxiranylmethyl ester, polymer with  
 3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10-heptafluorodecyl 2-propenoate and  
 2,2,3,3,4,4,5,5-octafluoropentyl 2-propenoate, 2-propenoate (9CI) (CA  
 INDEX NAME)

CM 1

CRN 79-10-7  
 CMF C3 H4 O2

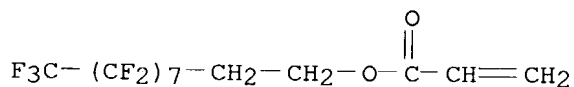


CM 2

CRN 140127-86-2  
 CMF (C13 H7 F17 O2 . C8 H6 F8 O2 . C7 H10 O3)x  
 CCI PMS

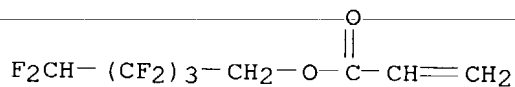
CM 3

CRN 27905-45-9  
 CMF C13 H7 F17 O2



CM 4

CRN 376-84-1  
 CMF C8 H6 F8 O2



CM 5

CRN 106-91-2

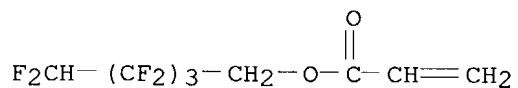


INDEX NAME)

CM 1

CRN 376-84-1

CMF C8 H6 F8 O2



CM 2

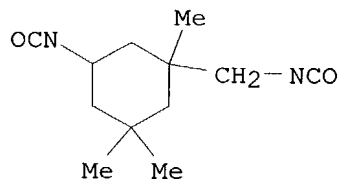
CRN 103680-05-3

CMF C12 H18 N2 O2 . C6 H10 O3

CM 3

CRN 4098-71-9

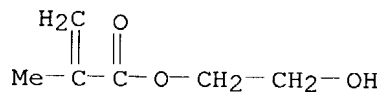
CMF C12 H18 N2 O2



CM 4

CRN 868-77-9

CMF C6 H10 O3



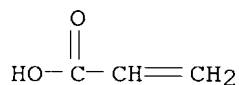
RN 118367-06-9 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, oxiranylmethyl ester, polymer with  
2,2,3,3,4,4,5,5-octafluoropentyl 2-propenoate, 2-propenoate (9CI) (CA  
INDEX NAME)

CM 1

CRN 79-10-7

CMF C3 H4 O2

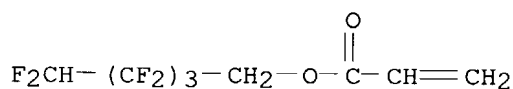


CM 2

CRN 242472-61-3  
CMF (C8 H6 F8 O2 . C7 H10 O3)x  
CCI PMS

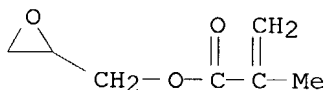
CM 3

CRN 376-84-1  
CMF C8 H6 F8 O2



CM 4

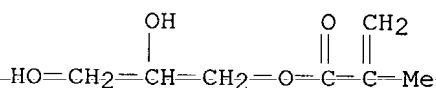
CRN 106-91-2  
CMF C7 H10 O3



RN 118367-07-0 HCAPLUS  
CN 2-Propenoic acid, 2-methyl-, polymer with 2,2,3,3,4,4,5,5-octafluoropentyl  
2-propenoate, 2-hydroxy-3-[(2-methyl-1-oxo-2-propenyl)oxy]propyl ester  
(9CI) (CA INDEX NAME)

CM 1

CRN 5919-74-4  
CMF C7 H12 O4



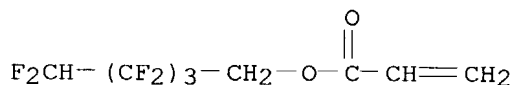
CM 2

CRN 106679-82-7  
CMF (C8 H6 F8 O2 . C4 H6 O2)x  
CCI PMS

CM 3

CRN 376-84-1

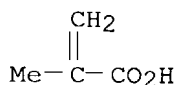
CMF C8 H6 F8 O2



CM 4

CRN 79-41-4

CMF C4 H6 O2



IT 125635-54-3P 125635-56-5P 125635-57-6P  
125635-58-7P 125635-59-8P 125635-60-1P  
125635-61-2P 125649-69-6P 125874-37-5P

RL: PREP (Preparation)

(manufacture of, as UV-cured weather-resistant optical fiber sheaths)

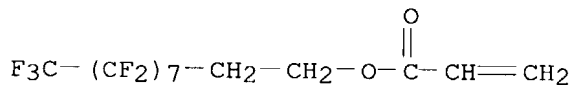
RN 125635-54-3 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, oxiranylmethyl ester, polymer with 3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,10-heptafluorodecyl 2-propenoate, 2,2,3,3,4,4,5,5-octafluoro-1,6-hexanediyl di-2-propenoate and 2-propenoic acid (9CI) (CA INDEX NAME)

CM 1

CRN 27905-45-9

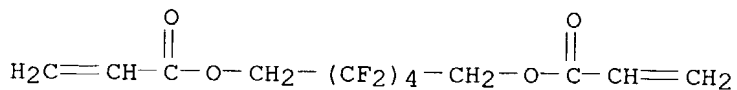
CMF C13 H7 F17 O2



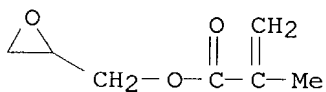
CM 2

CRN 2264-01-9

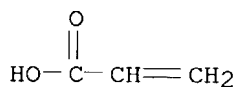
CMF C12 H10 F8 O4



CRN 106-91-2  
CMF C7 H10 O3

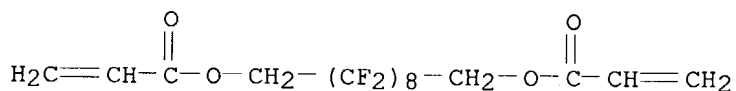


CRN 79-10-7  
CMF C3 H4 O2

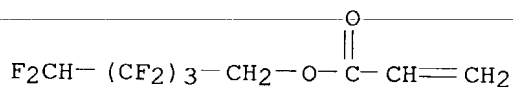


CN

CRN 125635-55-4  
CMF C16 H10 F16 O4

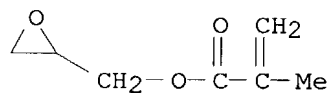


CRN 376-84-1  
CMF C8 H6 F8 O2



CRN 106-91-2

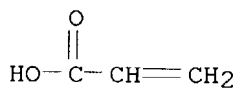
CMF C7 H10 O3



CM 4

CRN 79-10-7

CMF C3 H4 O2



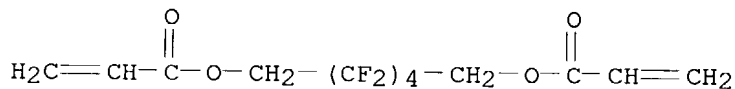
RN 125635-57-6 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, polymer with 2,2,3,3,4,4,5,5-octafluoro-1,6-hexanediyl di-2-propenoate, 2,2,3,3,4,4,5,5-octafluoropentyl 2-propenoate and oxiranylmethyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 2264-01-9

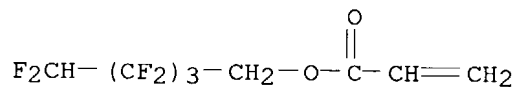
CMF C12 H10 F8 O4



CM 2

CRN 376-84-1

CMF C8 H6 F8 O2



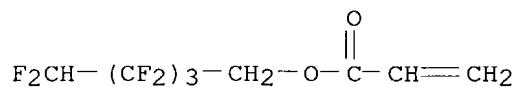
CM 3

CRN 106-91-2

CMF C7 H10 O3

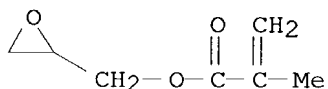






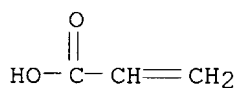
CM 4

CRN 106-91-2  
CMF C7 H10 O3



CM 5

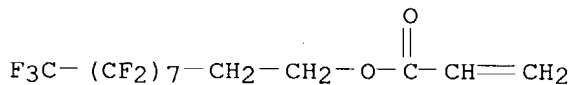
CRN 79-10-7  
CMF C3 H4 O2



RN 125635-59-8 HCAPLUS  
CN 2-Propenoic acid, 2-methyl-, 2-hydroxyethyl ester, polymer with  
3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,10-heptafluorodecyl 2-propenoate,  
2,2,3,3,4,4,5,5-octafluoro-1,6-hexanediyl di-2-propenoate and 2-propenoic  
acid (9CI) (CA INDEX NAME)

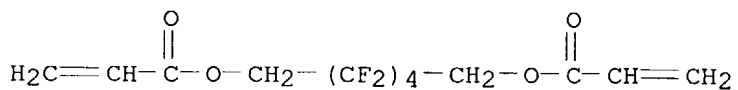
CM 1

CRN 27905-45-9  
CMF C13 H7 F17 O2



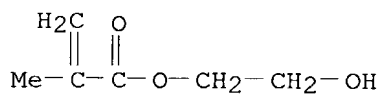
CM 2

CRN 2264-01-9  
CMF C12 H10 F8 O4



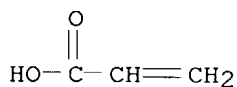
CM 3

CRN 868-77-9  
CMF C6 H10 O3



CM 4

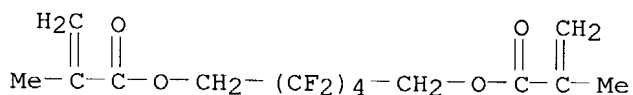
CRN 79-10-7  
CMF C3 H4 O2



RN 125635-60-1 HCAPLUS  
CN 2-Propenoic acid, 2-methyl-, 2,2,3,3,4,4,5,5-octafluoro-1,6-hexanediyl ester, polymer with 2-hydroxyethyl 2-methyl-2-propenoate, 2-hydroxyethyl 2-propenoate adduct with 5-isocyanato-1-(isocyanatomethyl)-1,3,3-trimethylcyclohexane (1:1), and 2,2,3,3-tetrafluoropropyl 2-propenoate (9CI) (CA INDEX NAME)

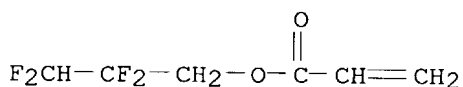
CM 1

CRN 66818-54-0  
CMF C14 H14 F8 O4



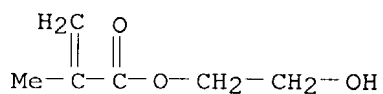
CM 2

CRN 7383-71-3  
CMF C6 H6 F4 O2



CM 3

CRN 868-77-9  
CMF C6 H10 O3

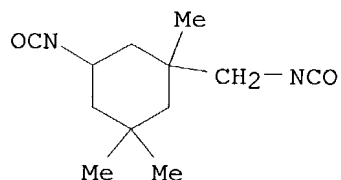


CM 4

CRN 78724-20-6  
CMF C12 H18 N2 O2 . C5 H8 O3

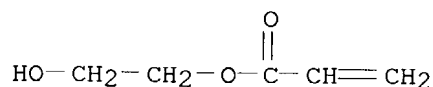
CM 5

CRN 4098-71-9  
CMF C12 H18 N2 O2



CM 6

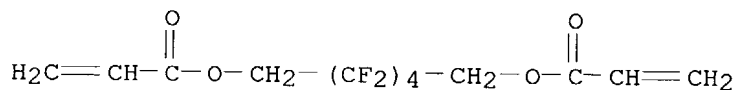
CRN 818-61-1  
CMF C5 H8 O3



RN 125635-61-2 HCAPLUS  
CN 2-Propenoic acid, 2-methyl-, 2-hydroxyethyl ester, polymer with 2-hydroxyethyl 2-methyl-2-propenoate adduct with 5-isocyanato-1-(isocyanatomethyl)-1,3,3-trimethylcyclohexane (1:1), 2,2,3,3,4,4,5,5-octafluoro-1,6-hexanediyl di-2-propenoate and 2,2,3,3,4,4,5,5-octafluoropentyl 2-propenoate (9CI) (CA INDEX NAME)

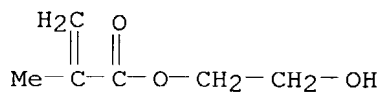
CM 1

CRN 2264-01-9  
CMF C12 H10 F8 O4



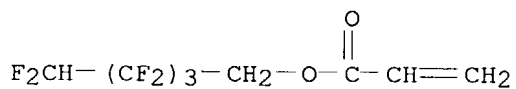
CM 2

CRN 868-77-9  
CMF C6 H10 O3



CM 3

CRN 376-84-1  
CMF C8 H6 F8 O2

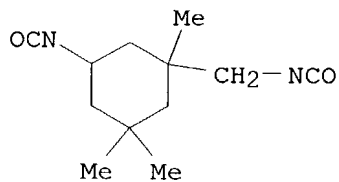


CM 4

CRN 103680-05-3  
CMF C12 H18 N2 O2 . C6 H10 O3

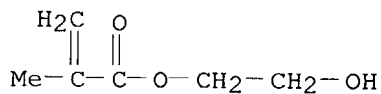
CM 5

CRN 4098-71-9  
CMF C12 H18 N2 O2



CM 6

CRN 868-77-9  
CMF C6 H10 O3



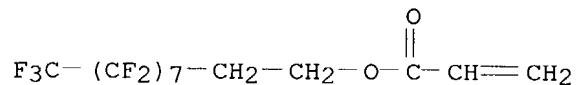
RN 125649-69-6 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, oxiranylmethyl ester, polymer with  
3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,10-heptafluorodecyl 2-propenoate,  
2,2,3,3,4,4,5,5-octafluoro-1,6-hexanediyl di-2-propenoate,  
2,2,3,3,4,4,5,5-octafluoropentyl 2-propenoate and 2-propenoic acid (9CI)  
(CA INDEX NAME)

CM 1

CRN 27905-45-9

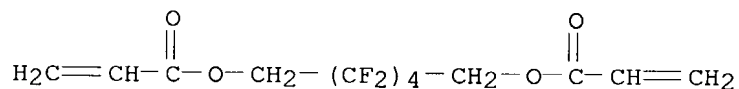
CMF C13 H7 F17 O2



CM 2

CRN 2264-01-9

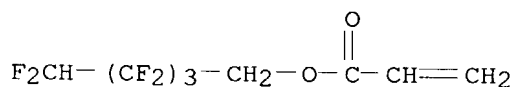
CMF C12 H10 F8 O4



CM 3

CRN 376-84-1

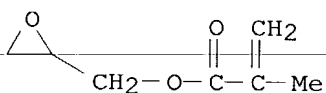
CMF C8 H6 F8 O2



CM 4

CRN 106-91-2

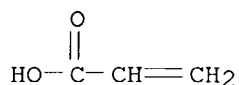
CMF C7 H10 O3



CM 5

CRN 79-10-7

CMF C3 H4 O2



RN 125874-37-5 HCAPLUS

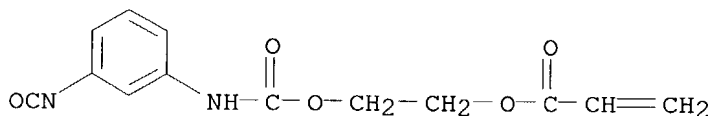
CN 2-Propenoic acid, 2-methyl-, 2-hydroxyethyl ester, polymer with  
3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,10-heptadecafluorodecyl 2-propenoate,  
2-[[[(3-isocyanatomethylphenyl)amino]carbonyl]oxy]ethyl 2-propenoate and  
2,2,3,3,4,4,5,5-octafluoro-1,6-hexanediyl di-2-propenoate (9CI) (CA INDEX  
NAME)

CM 1

CRN 54554-39-1

CMF C14 H14 N2 O5

CCI IDS

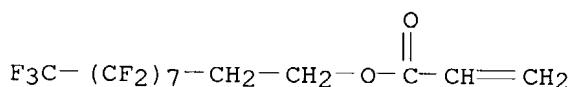


D1-Me

CM 2

CRN 27905-45-9

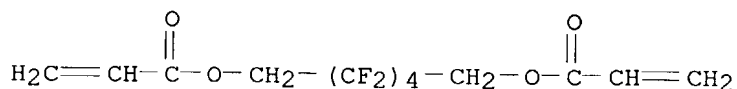
CMF C13 H7 F17 O2



CM 3

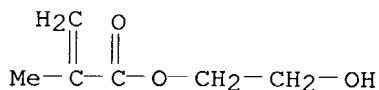
CRN 2264-01-9

CMF C12 H10 F8 O4



CM 4

CRN 868-77-9  
CMF C6 H10 O3



IT 125658-82-4P

RL: PREP (Preparation)

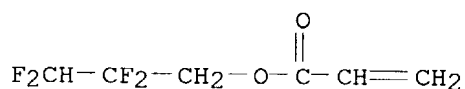
(manufacture of, as coating for ABS polymer sheet)

RN 125658-82-4 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, 2-hydroxyethyl ester, polymer with  
2-hydroxyethyl 2-propenoate adduct with 5-isocyanato-1-(isocyanatomethyl)-  
1,3,3-trimethylcyclohexane (1:1), 2,2,3,3,4,4,5,5-octafluoro-1,6-  
hexanediyl di-2-propenoate and 2,2,3,3-tetrafluoropropyl 2-propenoate  
(9CI) (CA INDEX NAME)

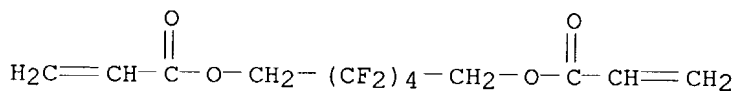
CM 1

CRN 7383-71-3  
CMF C6 H6 F4 O2



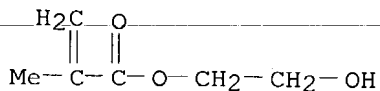
CM 2

CRN 2264-01-9  
CMF C12 H10 F8 O4



CM 3

CRN 868-77-9  
CMF C6 H10 O3



CM 4

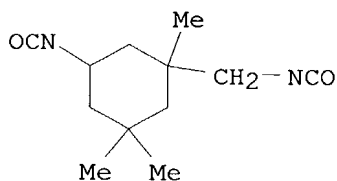
CRN 78724-20-6

CMF C12 H18 N2 O2 . C5 H8 O3

CM 5

CRN 4098-71-9

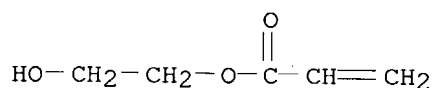
CMF C12 H18 N2 O2



CM 6

CRN 818-61-1

CMF C5 H8 O3



IT 125658-78-8P

RL: **PREP (Preparation)**

(manufacture of, as coating for PET film)

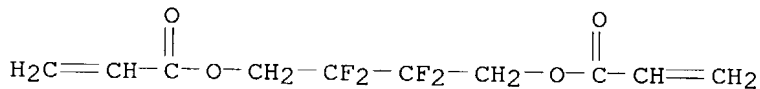
RN 125658-78-8 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, 2-hydroxyethyl ester, polymer with 3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,10-heptafluorodecyl 2-propenoate, 2,2,3,3,4,4,5,5-octafluoropentyl 2-propenoate, 2-propenoic acid and 2,2,3,3-tetrafluoro-1,4-butanediyl di-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 125658-77-7

CMF C10 H10 F4 O4

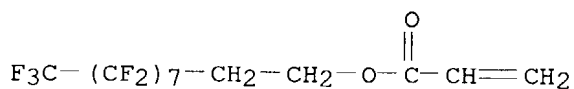


CM 2

CRN 27905-45-9

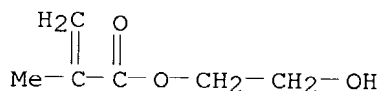
CMF C13 H7 F17 O2





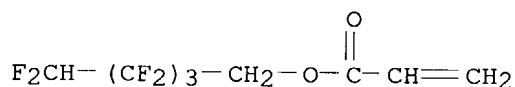
CM 3

CRN 868-77-9  
CMF C6 H10 O3



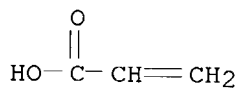
CM 4

CRN 376-84-1  
CMF C8 H6 F8 O2



CM 5

CRN 79-10-7  
CMF C3 H4 O2



IT 125658-79-9P

RL: PREP (Preparation)

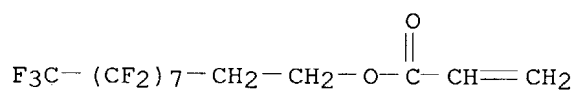
(manufacture of, as coating for acrylic sheet)

RN 125658-79-9 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, oxiranylmethyl ester, polymer with  
3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,10-heptadecafluorodecyl 2-propenoate,  
1,6-hexanediyl di-2-propenoate, 2,2,3,3,4,4,5,5-octafluoro-1,6-hexanediyl  
di-2-propenoate and 2-propenoic acid (9CI) (CA INDEX NAME)

CM 1

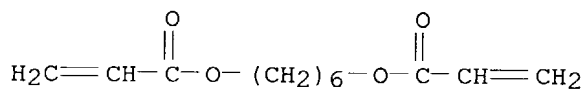
CRN 27905-45-9  
CMF C13 H7 F17 O2



CM 2

CRN 13048-33-4

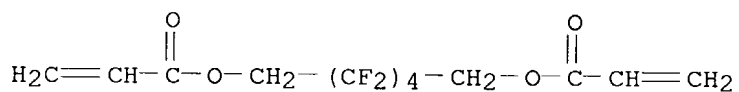
CMF C12 H18 O4



CM 3

CRN 2264-01-9

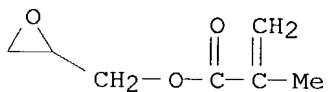
CMF C12 H10 F8 O4



CM 4

CRN 106-91-2

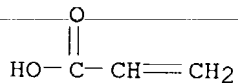
CMF C7 H10 O3



CM 5

CRN 79-10-7

CMF C3 H4 O2



IT 125658-81-3P

RL: **PREP (Preparation)**

(manufacture of, as coating for slate)

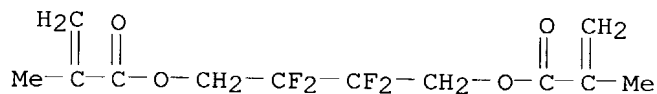
RN 125658-81-3 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, 2,2,3,3-tetrafluoro-1,4-butanediyl ester, polymer with 2,2,3,3,4,4,5,5-octafluoropentyl 2-propenoate, oxiranylmethyl 2-methyl-2-propenoate and 2-propenoic acid (9CI) (CA INDEX NAME)

CM 1

CRN 125658-80-2

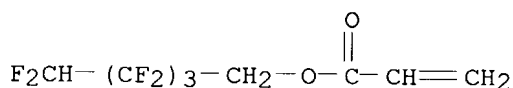
CMF C12 H14 F4 O4



CM 2

CRN 376-84-1

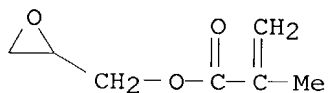
CMF C8 H6 F8 O2



CM 3

CRN 106-91-2

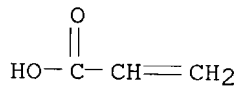
CMF C7 H10 O3



CM 4

CRN 79-10-7

CMF C3 H4 O2



L24 ANSWER 27 OF 27 HCAPLUS COPYRIGHT 2003 ACS on STN

AN 1989:616144 HCAPLUS

DN 111:216144

ED Entered STN: 09 Dec 1989

TI Photocurable coating materials and optical fibers coated with them

IN Skutnik, Bolesh J.; Brielmann, Harry L., Jr.

KATHLEEN FULLER EIC 1700/PARKER LAW 308-4290

PA Ensign-Bickford Industries, Inc., USA  
 SO Jpn. Kokai Tokkyo Koho, 8 pp.  
 CODEN: JKXXAF  
 DT Patent  
 LA Japanese  
 IC ICM C09D003-74  
 ICS C03C025-02; G02B006-44  
 CC 42-13 (Coatings, Inks, and Related Products)  
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 01062363	A2	19890308	JP 1987-218070	19870902
	CA 1307071	A1	19920901	CA 1987-545139	19870824
	FR 2684681	A1	19930611	FR 1992-15010	19921214
	FR 2684681	B1	19980731		
PRAI	JP 1987-218070		19870902		
AB	The coating compns., easily adjusted to meet performance requirements in final use, contain $\geq 1$ ethylenically unsatd. monoene, an ethylenically unsatd. polyene, and a curing <b>initiator</b> as essential components. A typical <b>UV-curable composition</b> comprised vinyltrimethoxysilane 12, trimethylolpropane triacrylate 87, and 2-hydroxy-2-methyl-1-phenyl-1-propanone 1%.				
ST	optical fiber cladding photocurable coating; vinylsilane coating optical fiber; acrylic coating optical fiber				
IT	Optical fibers				
	(photocurable acrylic coating compns. for cladding of)				
IT	Coating materials				
	(photocurable, for cladding of optical fibers)				
IT	122506-24-5	122506-25-6	122538-81-2		
	RL: TEM (Technical or engineered material use); USES (Uses)				
	(coatings, photocurable, for cladding of optical fibers)				
IT	7473-98-5, 2-Hydroxy-2-methyl-1-phenylpropan-1-one				
	RL: USES (Uses)				
	(initiator, for photocuring of acrylic coating materials on optical fibers)				
IT	79923-98-1P, Isodecyl acrylate-trimethylolpropane triacrylate copolymer				
	123198-67-4P, Isobornyl acrylate-trimethylolpropane triacrylate copolymer				
	123222-95-7P				
	RL: PREP (Preparation)				
	(manufacture of, photocurable, with controlled hardness, for cladding of optical fibers)				
IT	123162-64-1P	123162-66-3P	123162-68-5P		
	123182-40-1P	123198-49-2P	123198-50-5P	123198-51-6P	
	123198-52-7P	123198-53-8P	123198-54-9P		
	123198-55-0P	123198-56-1P	123198-58-3P		
	123198-60-7P	123198-61-8P	123198-62-9P	123198-63-0P	
	123198-64-1P	123198-65-2P	123198-66-3P		
	123204-03-5P	123204-04-6P	123214-67-5P		
	123214-68-6P	123214-69-7P	123214-70-0P		
	123214-71-1P	123222-94-6P	123246-62-8P		
	123351-79-1P	123351-80-4P			
	RL: PREP (Preparation)				
	(manufacture of, with controlled refractive index, photocurable, for cladding of optical fibers)				
IT	123162-64-1P	123162-66-3P	123162-68-5P		
	123198-49-2P	123198-50-5P	123198-52-7P		
	123198-53-8P	123198-54-9P	123198-55-0P		
	123198-56-1P	123198-58-3P	123198-60-7P		

123198-62-9P 123198-64-1P 123198-65-2P  
 123198-66-3P 123204-03-5P 123204-04-6P  
 123214-67-5P 123214-68-6P 123214-70-0P  
 123214-71-1P 123222-94-6P 123351-79-1P  
 123351-80-4P

RL: **PREP (Preparation)**

(manufacture of, with controlled refractive index, photocurable, for cladding of optical fibers)

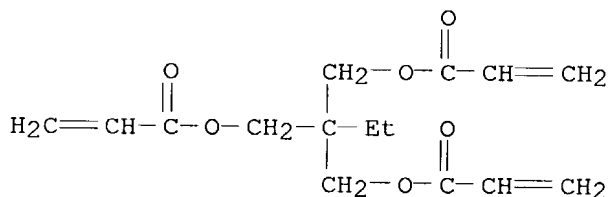
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CN Butanedioic acid, methylene-, dimethyl ester, polymer with 2,2,3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,11,11-eicosafluoroundecyl 2-propenoate, 2-ethyl-2-[[[(1-oxo-2-propenyl)oxy]methyl]-1,3-propanediyl di-2-propenoate and 3-(trimethoxysilyl)propyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 15625-89-5

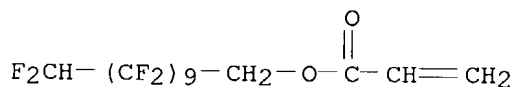
CMF C15 H20 O6



CM 2

CRN 4998-38-3

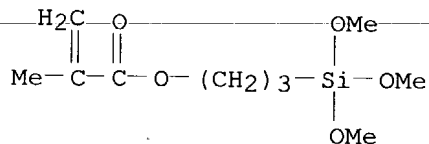
CMF C14 H6 F20 O2



CM 3

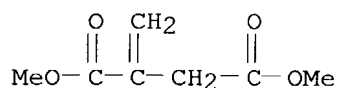
CRN 2530-85-0

CMF C10 H20 O5 Si



CM 4

CRN 617-52-7  
CMF C7 H10 O4

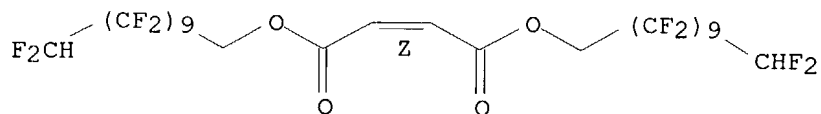


RN	123162-66-3	HCAPLUS
CN	2-Butenedioic acid (2Z)-, bis(2,2,3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,11,11-eicosafuoroundecyl) ester, polymer with 2,2,3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,11,11-eicosafuoroundecyl 2-propenoate, 2-ethyl-2-[(1-oxo-2-propenyl)oxy]methyl]-1,3-propanediyl di-2-propenoate and 3-(trimethoxysilyl)propyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)	

CM 1

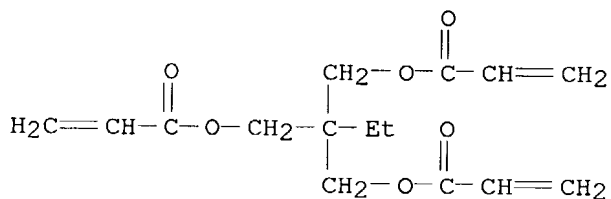
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Double bond geometry as shown.



CM 2

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CMF C15 H20 O6

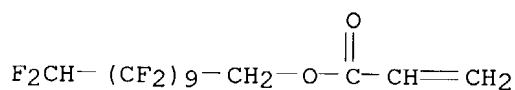


CM 3

CRN 4998-38-3

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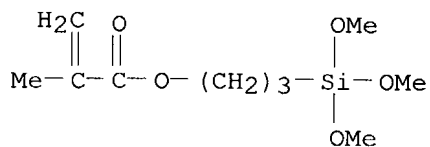
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CM 4

CRN 2530-85-0

CMF C10 H20 O5 Si



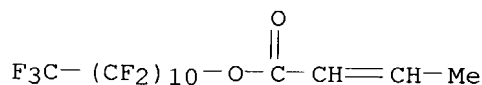
RN 123162-68-5 HCAPLUS

CN 2-Butenoic acid, tricosafuorodecyl ester, polymer with  
2-ethyl-2-[[ (1-oxo-2-propenyl)oxy]methyl]-1,3-propanediyl di-2-propenoate  
and 3-(trimethoxysilyl)propyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 123162-67-4

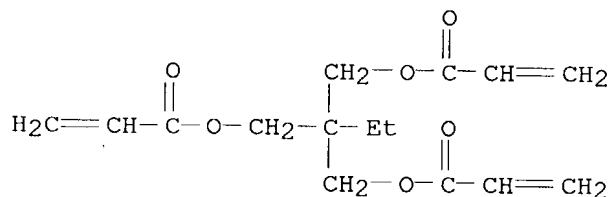
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CM 2

CRN 15625-89-5

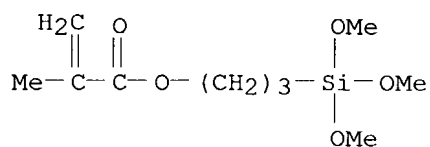
CMF C15 H20 O6



CM 3

CRN 2530-85-0

CMF C10 H20 O5 Si



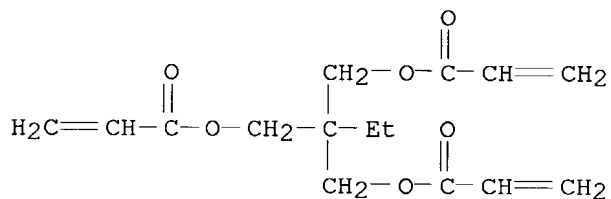
RN 123198-49-2 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, 3-(trimethoxysilyl)propyl ester, polymer with 2-[ethyl[(heptadecafluorooctyl)sulfonyl]amino]ethyl 2-propenoate and 2-ethyl-2-[[[(1-oxo-2-propenyl)oxy]methyl]-1,3-propanediyl di-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 15625-89-5

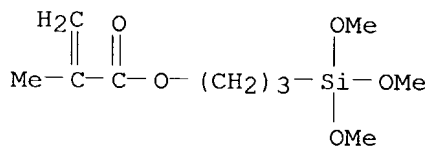
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CM 2

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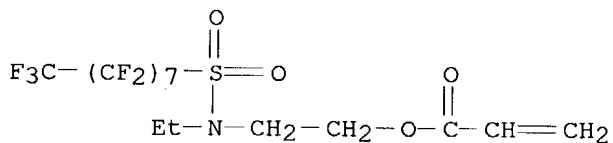
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CM 3

CRN 423-82-5

CMF C15 H12 F17 N O4 S



RN 123198-50-5 HCAPLUS

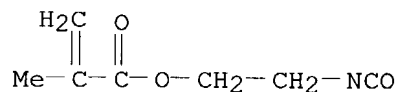


CN 2-Propenoic acid, 2-methyl-, 2-isocyanatoethyl ester, polymer with  
2,2,3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,11,11-eicosaf luoroundecyl  
2-propenoate, 2-ethyl-2-[[ (1-oxo-2-propenyl)oxy]methyl]-1,3-propanediyl  
di-2-propenoate and 3-(trimethoxysilyl)propyl 2-methyl-2-propenoate (9CI)  
(CA INDEX NAME)

CM 1

CRN 30674-80-7

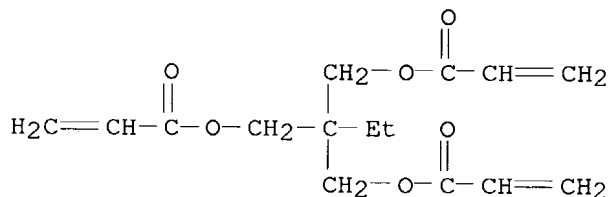
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CM 2

CRN 15625-89-5

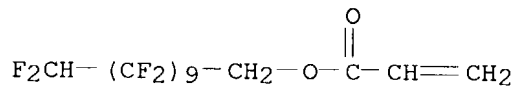
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CM 3

CRN 4998-38-3

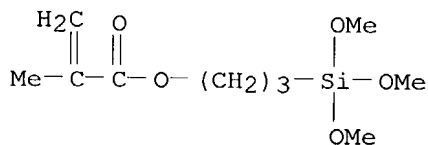
CMF C14 H6 F20 O2



CM 4

CRN 2530-85-0

CMF C10 H20 O5 Si

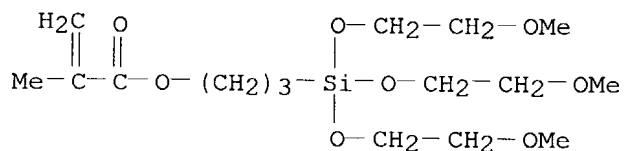


RN 123198-52-7 HCAPLUS  
 CN 2-Propenoic acid, 2-methyl-, 3-(trimethoxysilyl)propyl ester, polymer with  
 2,2,3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,11,11-eicosaflluoroundecyl  
 2-propenoate, 2-ethyl-2-[[ (1-oxo-2-propenyl)oxy)methyl]-1,3-propanediyl  
 di-2-propenoate and 3-[tris(2-methoxyethoxy)silyl]propyl  
 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 57069-48-4

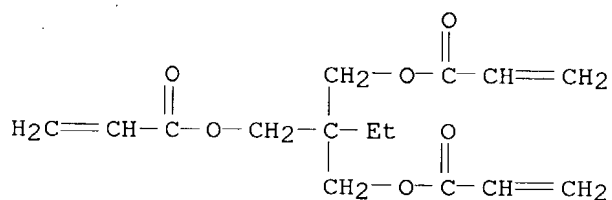
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CM 2

CRN 15625-89-5

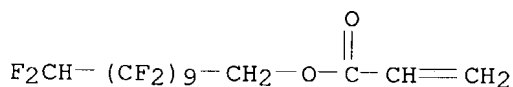
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CM 3

CRN 4998-38-3

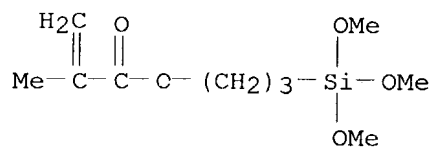
CMF C14 H6 F20 O2



CM 4

CRN 2530-85-0

CMF C10 H20 O5 Si

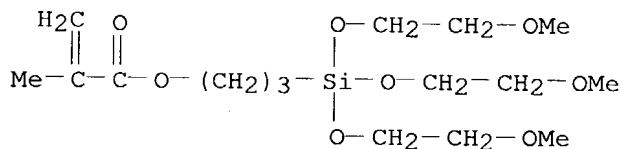


RN 123198-53-8 HCAPLUS  
 CN 2-Propenoic acid, 2-methyl-, 3-(trimethoxysilyl)propyl ester, polymer with 2,2,3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,11,11-eicosafluoroundecyl 2-propenoate, 2-ethyl-2-[[[(1-oxo-2-propenyl)oxy]methyl]-1,3-propanediyl di-2-propenoate, exo-1,7,7-trimethylbicyclo[2.2.1]hept-2-yl 2-propenoate and 3-[tris(2-methoxyethoxy)silyl]propyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

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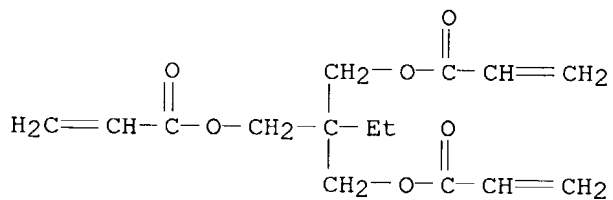
CMF C16 H32 O8 Si



CM 2

CRN 15625-89-5

CMF C15 H20 O6

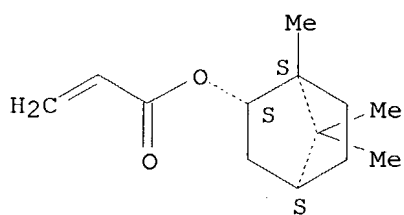


CM 3

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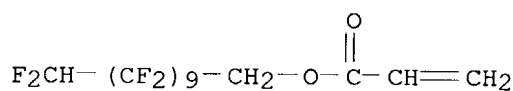
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Relative stereochemistry.



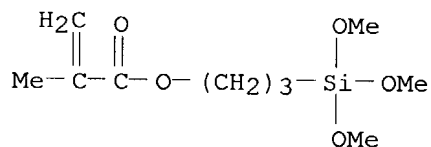
CM 4

CRN 4998-38-3  
CMF C14 H6 F20 O2



CM 5

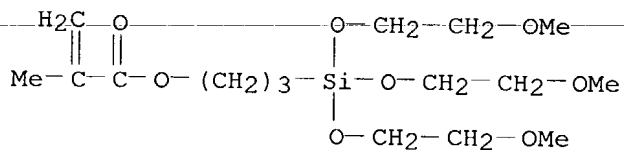
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CMF C10 H20 O5 Si



RN 123198-54-9 HCAPLUS  
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with 2,2,3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,11,11-eicosaflluoroundecyl  
2-propenoate, 2-ethyl-2-[[[1-oxo-2-propenyl)oxy)methyl]-1,3-propanediyl  
di-2-propenoate and 3-[tris(2-methoxyethoxy)silyl]propyl  
2-methyl-2-propenoate (9CI) (CA INDEX NAME)

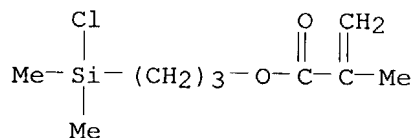
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CRN 57069-48-4  
CMF C16 H32 O8 Si



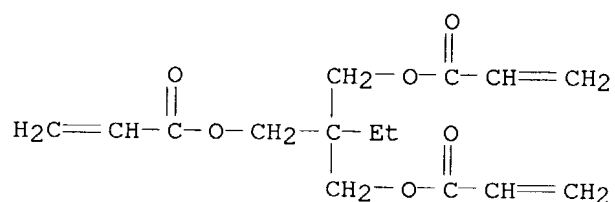
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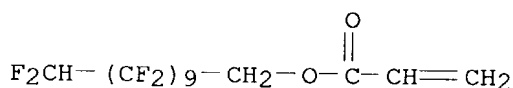
CM 3

CRN 15625-89-5  
CMF C15 H20 O6



CM 4

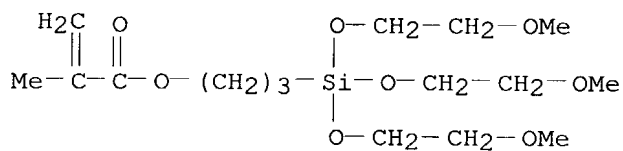
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CMF C14 H6 F20 O2



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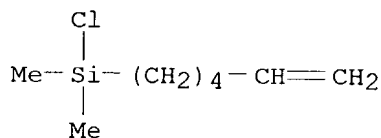
CM 1

CRN 57069-48-4  
CMF C16 H32 O8 Si



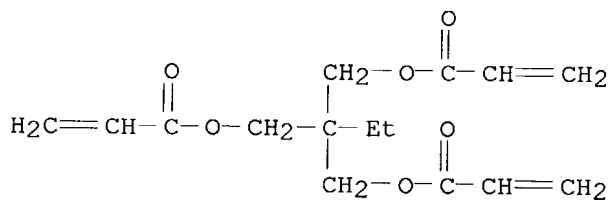
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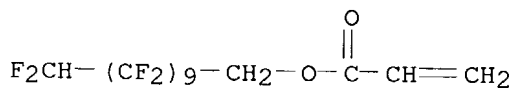
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CMF C15 H20 O6



CM 4

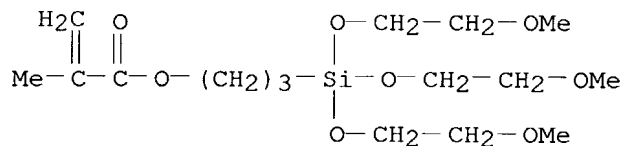
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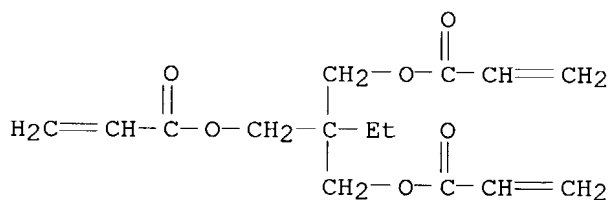
CM 1

CRN 57069-48-4  
CMF C16 H32 O8 Si



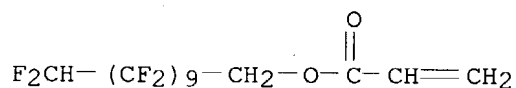
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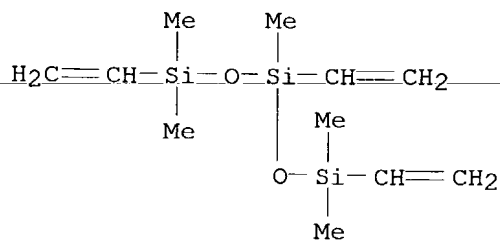
CM 3

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CM 4

CRN 1529-65-3  
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RN 123198-58-3 HCAPLUS

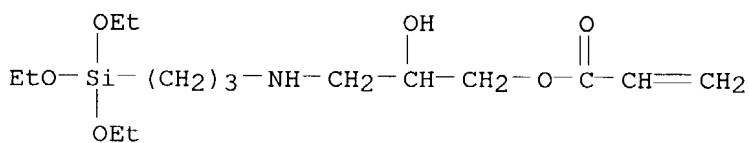
KATHLEEN FULLER EIC 1700/PARKER LAW 308-4290

CN 2-Propenoic acid, 2-methyl-, 3-[tris(2-methoxyethoxy)silyl]propyl ester, polymer with 2,2,3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,11,11-eicosafuoroundecyl 2-propenoate, 2-ethyl-2-[[1-oxo-2-propenyl)oxy]methyl]-1,3-propanediyl di-2-propenoate and 2-hydroxy-3-[[3-(triethoxysilyl)propyl]amino]propyl 2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 123198-57-2

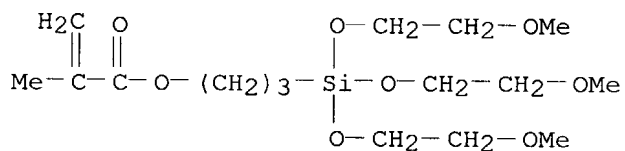
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CM 2

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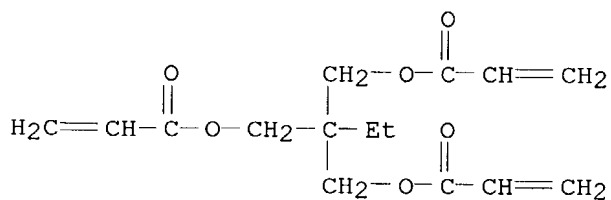
CMF C16 H32 O8 Si



CM 3

CRN 15625-89-5

CMF C15 H20 O6

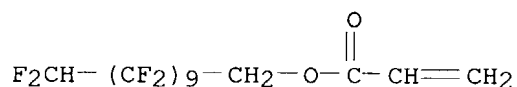


CM 4

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CMF C14 H6 F20 O2





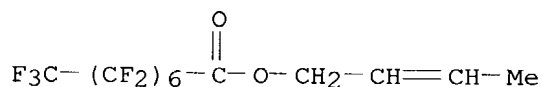
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CN Octanoic acid, pentadecafluoro-, 2-butenyl ester, polymer with 3-(trimethoxysilyl)propyl 2-methyl-2-propenoate, 3-[tris(2-methoxyethoxy)silyl]propyl 2-methyl-2-propenoate and 2,4,6-tris(2-propenyloxy)-1,3,5-triazine (9CI) (CA INDEX NAME)

CM 1

CRN 123198-59-4

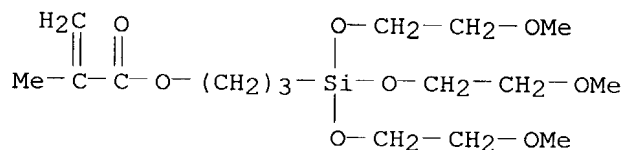
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CM 2

CRN 57069-48-4

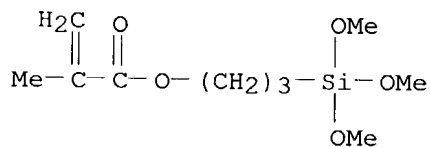
CMF C16 H32 O8 Si



CM 3

CRN 2530-85-0

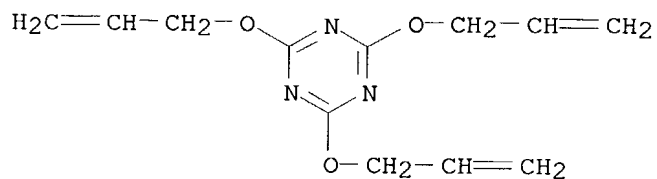
CMF C10 H20 O5 Si



CM 4

CRN 101-37-1

CMF C12 H15 N3 O3



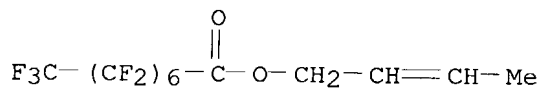
RN 123198-62-9 HCAPLUS

CN Octanoic acid, pentadecafluoro-, 2-butenyl-, polymer with 2-ethyl-2-[[[(1-oxo-2-propenyl)oxy]methyl]-1,3-propanediyl di-2-propenoate, 2-propenyl 2-propenoate, 3-(trimethoxysilyl)propyl 2-methyl-2-propenoate and 3-[tris(2-methoxyethoxy)silyl]propyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 123198-59-4

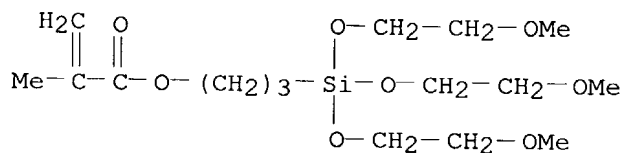
CMF C12 H7 F15 O2



CM 2

CRN 57069-48-4

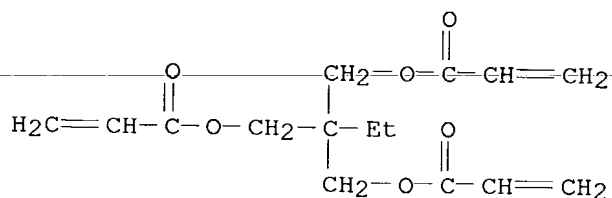
CMF C16 H32 O8 Si



CM 3

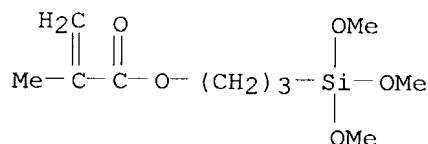
CRN 15625-89-5

CMF C15 H20 O6



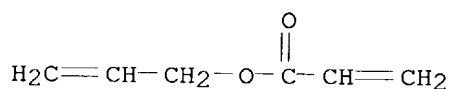
CM 4

CRN 2530-85-0  
CMF C10 H20 O5 Si



CM 5

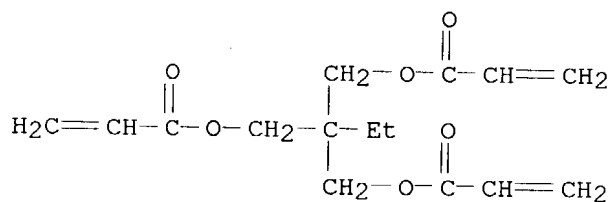
CRN 999-55-3  
CMF C6 H8 O2



RN 123198-64-1 HCAPLUS  
CN 2-Propenoic acid, 2-methyl-, 3-(trimethoxysilyl)propyl ester, polymer with 2,2,3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,11,11-eicosafluoroundecyl 2-propenoate and 2-ethyl-2-[[[(1-oxo-2-propenyl)oxy]methyl]-1,3-propanediyl di-2-propenoate (9CI) (CA INDEX NAME)

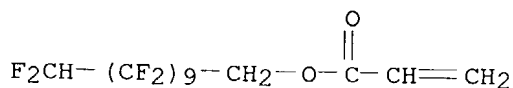
CM 1

CRN 15625-89-5  
CMF C15 H20 O6



CM 2

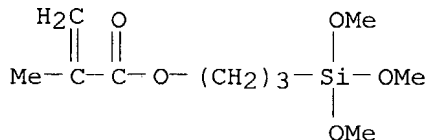
CRN 4998-38-3  
CMF C14 H6 F20 O2



CM 3

CRN 2530-85-0

CMF C10 H20 O5 Si



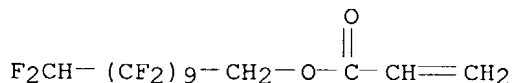
RN 123198-65-2 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, 3-(trimethoxysilyl)propyl ester, polymer with 2,2,3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,11,11-eicosaf luoroundecyl 2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 4998-38-3

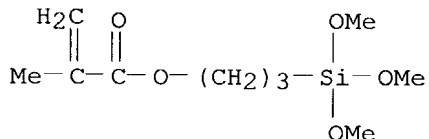
CMF C14 H6 F20 O2



CM 2

CRN 2530-85-0

CMF C10 H20 O5 Si



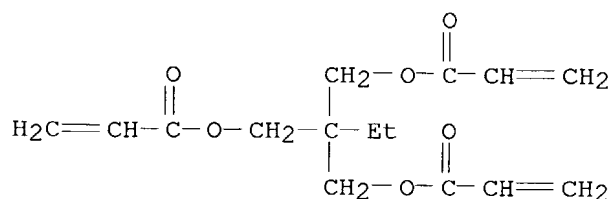
RN 123198-66-3 HCAPLUS

CN 2-Propenoic acid, 2-ethyl-2-[[ (1-oxo-2-propenyl)oxy]methyl]-1,3-propanediyl ester, polymer with 2,2,3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,11,11-eicosaf luoroundecyl 2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 15625-89-5

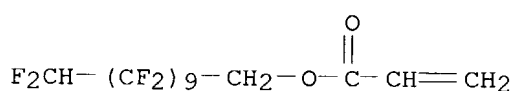
CMF C15 H20 O6



CM 2

CRN 4998-38-3

CMF C14 H6 F20 O2



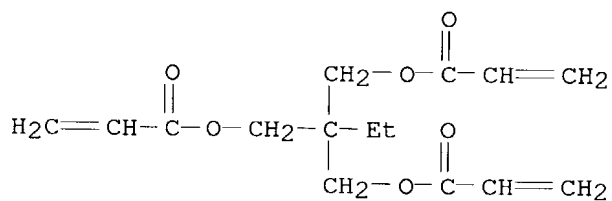
RN 123204-03-5 HCAPLUS

CN Butanedioic acid, methylene-, 2,2,3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,11,11-eicosafuoroundecyl methyl ester, polymer with 2-ethyl-2-[[[(1-oxo-2-propenyl)oxy]methyl]-1,3-propanediyl di-2-propenoate, 3-(trimethoxysilyl)propyl 2-methyl-2-propenoate and exo-1,7,7-trimethylbicyclo[2.2.1]hept-2-yl 2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 15625-89-5

CMF C15 H20 O6

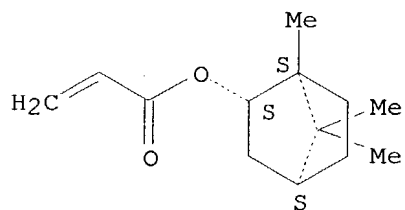


CM 2

CRN 5888-33-5

CMF C13 H20 O2

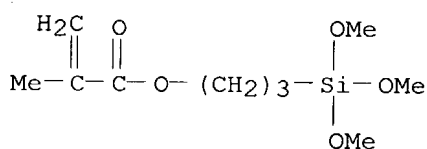
Relative stereochemistry.



CM 3

CRN 2530-85-0

CMF C10 H20 O5 Si



CM 4

CRN 123204-02-4

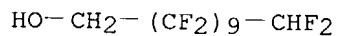
CMF C17 H10 F20 O4

CCI IDS

CM 5

CRN 307-70-0

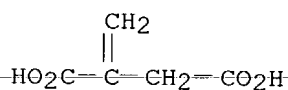
CMF C11 H4 F20 O



CM 6

CRN 97-65-4

CMF C5 H6 O4



CM 7

CRN 67-56-1

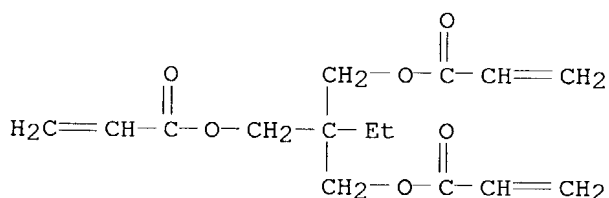
CMF C H4 O

H<sub>3</sub>C-OH

RN 123204-04-6 HCAPLUS  
 CN Butanedioic acid, methylene-, 2,2,3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,11,11-eicosaf luoroundecyl methyl ester, polymer with 2-ethyl-2-[(1-oxo-2-propenyl)oxy]methyl]-1,3-propanediyl di-2-propenoate and 3-(trimethoxysilyl)propyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

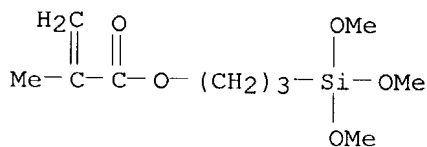
CM 1

CRN 15625-89-5  
 CMF C15 H20 O6



CM 2

CRN 2530-85-0  
 CMF C10 H20 O5 Si



CM 3

CRN 123204-02-4  
 CMF C17 H10 F20 O4  
 CCI IDS

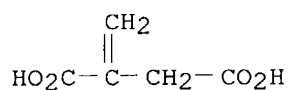
CM 4

CRN 307-70-0  
 CMF C11 H4 F20 O

HO-CH<sub>2</sub>-(CF<sub>2</sub>)<sub>9</sub>-CHF<sub>2</sub>

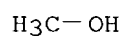
CM 5

CRN 97-65-4  
CMF C5 H6 O4



CM 6

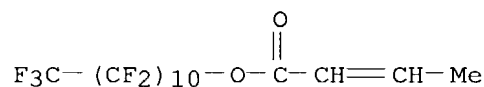
CRN 67-56-1  
CMF C H4 O



RN 123214-67-5 HCAPLUS  
CN 2-Butenoic acid, tricosafuoroundecyl ester, polymer with  
2,2,3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,11,11-eicosafuoroundecyl  
2-propenoate, 2-ethyl-2-[[ (1-oxo-2-propenyl)oxy]methyl]-1,3-propanediyl  
di-2-propenoate and 3-(trimethoxysilyl)propyl 2-methyl-2-propenoate (9CI)  
(CA INDEX NAME)

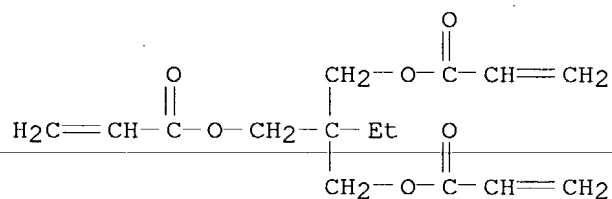
CM 1

CRN 123162-67-4  
CMF C15 H5 F23 O2



CM 2

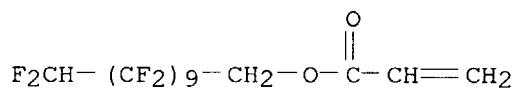
CRN 15625-89-5  
CMF C15 H20 O6



CM 3

CRN 4998-38-3  
CMF C14 H6 F20 O2

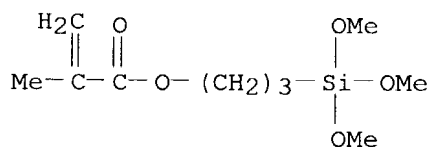




CM 4

CRN 2530-85-0

CMF C10 H20 O5 Si



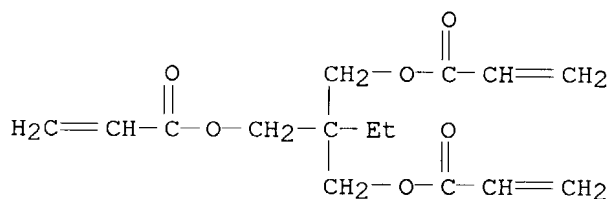
RN 123214-68-6 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, 3-(trimethoxysilyl)propyl ester, polymer with 2,2,3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,11,11-eicosafluoroundecyl 2-propenoate, 2-[ethyl[(heptadecafluorooctyl)sulfonyl]amino]ethyl 2-propenoate and 2-ethyl-2-[[ (1-oxo-2-propenyl)oxy]methyl]-1,3-propanediyl di-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 15625-89-5

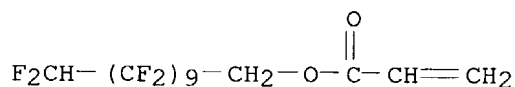
CMF C15 H20 O6



CM 2

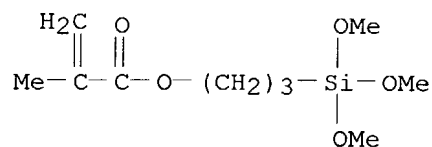
CRN 4998-38-3

CMF C14 H6 F20 O2



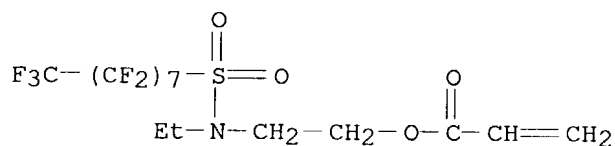
CM 3

CRN 2530-85-0  
CMF C10 H20 O5 Si



CM 4

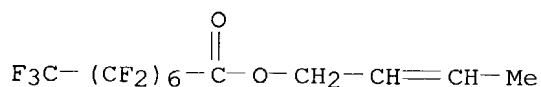
CRN 423-82-5  
CMF C15 H12 F17 N O4 S



RN 123214-70-0 HCAPLUS  
CN Octanoic acid, pentadecafluoro-, 2-butenyl ester, polymer with  
1,5-hexadien-3-one, 3-(trimethoxysilyl)propyl 2-methyl-2-propenoate and  
2,4,6-tris(2-propenyloxy)-1,3,5-triazine (9CI) (CA INDEX NAME)

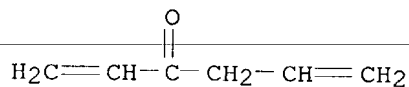
CM 1

CRN 123198-59-4  
CMF C12 H7 F15 O2



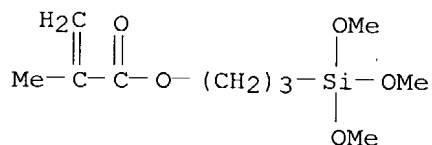
CM 2

CRN 6857-93-8  
CMF C6 H8 O



CM 3

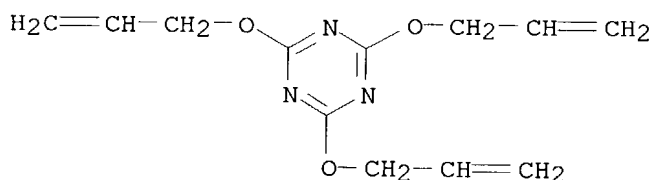
CRN 2530-85-0  
CMF C10 H20 O5 Si



CM 4

CRN 101-37-1

CMF C12 H15 N3 O3



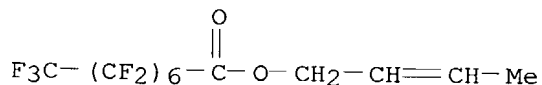
RN 123214-71-1 HCAPLUS

CN Octanoic acid, pentadecafluoro-, 2-butenyl ester, polymer with 2-ethyl-2-[[[(1-oxo-2-propenyl)oxy]methyl]-1,3-propanediyl di-2-propenoate, 1,5-hexadien-3-one, 3-(trimethoxysilyl)propyl 2-methyl-2-propenoate and 2,4,6-tris(2-propenyloxy)-1,3,5-triazine (9CI) (CA INDEX NAME)

CM 1

CRN 123198-59-4

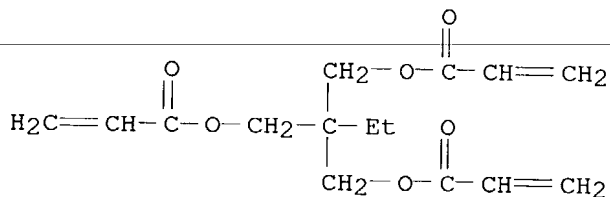
CMF C12 H7 F15 O2



CM 2

CRN 15625-89-5

CMF C15 H20 O6

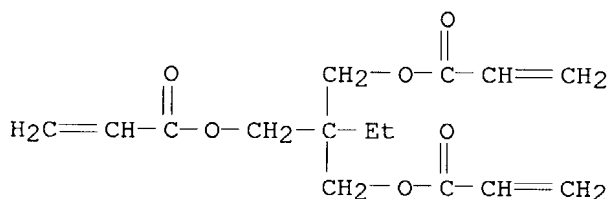




CM 2

CRN 15625-89-5

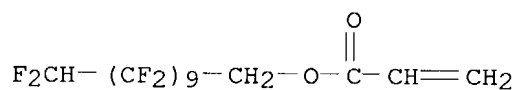
CMF C15 H20 O6



CM 3

CRN 4998-38-3

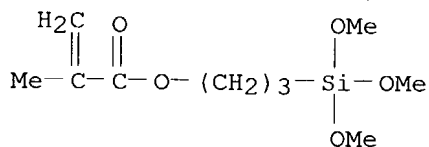
CMF C14 H6 F20 O2



CM 4

CRN 2530-85-0

CMF C10 H20 O5 Si



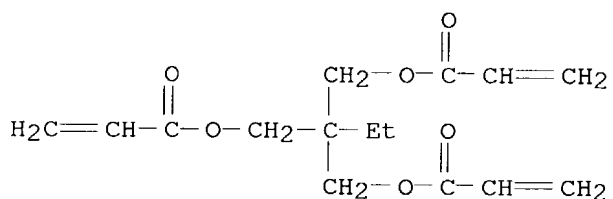
RN 123351-79-1 HCAPIUS

CN 2-Propenoic acid, 2-methyl-, 2-[ethyl[(heptadecafluorooctyl)sulfonyl]amino]ethyl ester, polymer with 2-ethyl-2-[[[1-oxo-2-propenyl]oxy]methyl]-1,3-propanediyl di-2-propenoate and 3-(trimethoxysilyl)propyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 15625-89-5

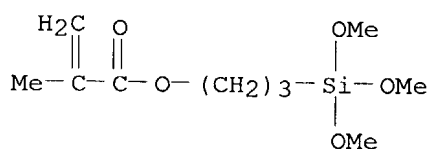
CMF C15 H20 O6



CM 2

CRN 2530-85-0

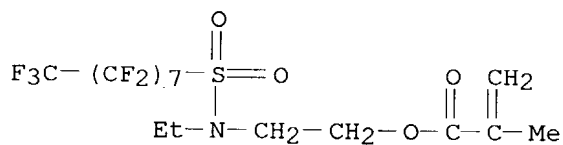
CMF C10 H20 O5 Si



CM 3

CRN 376-14-7

CMF C16 H14 F17 N O4 S



RN 123351-80-4 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, 2-[ethyl[(heptadecafluorooctyl)sulfonyl]amino]ethyl ester, polymer with 2,2,3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,11,11-eicosafuoroundecyl 2-propenoate, 2-ethyl-2-[[[1-oxo-2-propenyl)oxy)methyl]-1,3-propanediyl di-2-propenoate and 3-(trimethoxysilyl)propyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 15625-89-5

CMF C15 H20 O6



L9 79 SEA FILE=HCAPLUS ABB=ON L8 AND CUR?(3A) (PHOTO? OR LIGHT? OR ENERGY?)  
 L10 102 SEA FILE=HCAPLUS ABB=ON L8 AND (UV OR ULTRA? ) (3A) CUR?  
 L11 152 SEA FILE=HCAPLUS ABB=ON L9 OR L10  
 L12 28 SEA FILE=HCAPLUS ABB=ON L11 AND (PHOTO? OR LIGHT) (3A)?POLYMERI?  
 L13 54900 SEA FILE=REGISTRY ABB=ON L5 AND 3-30/F  
 L14 36894 SEA FILE=HCAPLUS ABB=ON L13  
 L15 13974 SEA FILE=HCAPLUS ABB=ON L14 (L) (PREP OR IMF OR SPN)/RL  
 L20 177 SEA FILE=HCAPLUS ABB=ON L15 AND (UV OR ULTRA? ) (3A) CUR?  
 L21 100 SEA FILE=HCAPLUS ABB=ON L20 AND COMPOSITION?  
 L24 27 SEA FILE=HCAPLUS ABB=ON L21 AND INITIAT?  
 L25 45 SEA FILE=HCAPLUS ABB=ON L24 OR L12  
 L26 1699 SEA FILE=HCAPLUS ABB=ON POLYFLUOROALKYL?  
 L27 43881 SEA FILE=HCAPLUS ABB=ON (PHOTO? OR LIGHT? OR UV OR ULTRA?) (3A)  
 (FUNC? OR GROUP#)  
 L28 7 SEA FILE=HCAPLUS ABB=ON L26 AND L27  
 L29 92 SEA FILE=HCAPLUS ABB=ON L15 AND RAD? (3A) CUR?  
 L30 41 SEA FILE=HCAPLUS ABB=ON L29 AND COMPOSITION? AND COPOLYMER?  
 L31 19 SEA FILE=HCAPLUS ABB=ON L30 AND FILM#  
 L32 58 SEA FILE=HCAPLUS ABB=ON L25 OR L31  
 L33 13 SEA FILE=HCAPLUS ABB=ON L32 NOT L25  
 L34 3 SEA FILE=HCAPLUS ABB=ON L26 AND RAD? (3A) CUR?  
 L35 9 SEA FILE=HCAPLUS ABB=ON L28 OR L34  
 L36 22 SEA FILE=HCAPLUS ABB=ON L35 OR L33

*Left search*

=> D L36 ALL 1-22 HITSTR

L36 ANSWER 1 OF 22 HCAPLUS COPYRIGHT 2003 ACS on STN  
 AN 2003:261904 HCAPLUS  
 DN 138:289098  
 ED Entered STN: 04 Apr 2003  
 TI Submicron inorganic particle-dispersed fluoropolymer coating  
**composition** for antireflective **film**  
 IN Yoshihara, Toshio; Niimi, Takahiro  
 PA Dai Nippon Printing Co., Ltd., Japan  
 SO PCT Int. Appl., 70 pp.  
 CODEN: PIXXD2  
 DT Patent  
 LA Japanese  
 IC ICM C09D004-00  
 ICS C09D007-12; C08J007-18; B32B027-30; G02B001-10  
 CC 42-10 (Coatings, Inks, and Related Products)  
 Section cross-reference(s): 74

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2003027189	A1	20030403	WO 2002-JP8928	20020903
	W: KR, US				
	JP 2003183592	A2	20030703	JP 2002-250977	20020829
PRAI	JP 2001-267209	A	20010904		
	JP 2001-291069	A	20010925		

AB Title coating **composition** comprises (A) binders containing both ionizing **radiation-curable** and thermally **curable** polar groups (including ≥1 fluoropolymer containing ionizing **radiation-curable** or/and thermally curable polar groups), e.g., Opstar JN 7217-pentaerythritol triacrylate



- copolymer**, and (B) submicron inorg. colloidal particles, silica MIBK-ST.
- ST submicron silica dispersed fluoropolymer coating antireflective **film**
- IT Coating materials  
(heat-curable; submicron inorg. particle-dispersed fluoropolymer coating **composition** for antireflective **film**)
- IT Fluoropolymers, uses  
RL: IMF (Industrial manufacture); POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(low-refractive-index layer containing; submicron inorg. particle-dispersed fluoropolymer coating **composition** for antireflective **film**)
- IT Coating materials  
(**radiation-curable**; submicron inorg. particle-dispersed fluoropolymer coating **composition** for antireflective **film**)
- IT Antireflective **films**  
(submicron inorg. particle-dispersed fluoropolymer coating **composition** for antireflective **film**)
- IT 9003-53-6, Polystyrene  
RL: MOA (Modifier or additive use); USES (Uses)  
(SX 130, hard coat; submicron inorg. particle-dispersed fluoropolymer coating **composition** for antireflective **film**)
- IT 4369-14-6, KBM 5103  
RL: MOA (Modifier or additive use); USES (Uses)  
(coupler, low-refractive-index layer containing; submicron inorg. particle-dispersed fluoropolymer coating **composition** for antireflective **film**)
- IT 9004-39-1, Cellulose acetate propionate  
RL: MOA (Modifier or additive use); USES (Uses)  
(hard coat; submicron inorg. particle-dispersed fluoropolymer coating **composition** for antireflective **film**)
- IT 57592-66-2P, Pentaerythritol tetraacrylate homopolymer  
RL: IMF (Industrial manufacture); MOA (Modifier or additive use); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(low-refractive-index layer and hard coat containing; submicron inorg. particle-dispersed fluoropolymer coating **composition** for antireflective **film**)
- IT 947-19-3, Irgacure 184 15306-17-9, ALCH TR  
RL: CAT (Catalyst use); USES (Uses)  
(low-refractive-index layer containing; submicron inorg. particle-dispersed fluoropolymer coating **composition** for antireflective **film**)
- IT 503831-49-0P  
RL: IMF (**Industrial manufacture**); POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); **PREP (Preparation)**; USES (Uses)  
(low-refractive-index layer containing; submicron inorg. particle-dispersed fluoropolymer coating **composition** for antireflective **film**)
- IT 7631-86-9D, MIBK-ST, optionally treated with pentaerythritol triacrylate 325690-79-7, Highlink OG 108 32  
RL: MOA (Modifier or additive use); USES (Uses)  
(low-refractive-index layer containing; submicron inorg. particle-dispersed fluoropolymer coating **composition** for antireflective **film**)

IT 503856-19-7, Opstar JN 7217 503856-21-1, Opstar JM 5010  
 RL: POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); USES (Uses)  
 (low-refractive-index layer containing; submicron inorg. particle-dispersed fluoropolymer coating **composition** for antireflective **film**)

IT 9012-09-3, Cellulose triacetate  
 RL: TEM (Technical or engineered material use); USES (Uses)  
 (substrate; submicron inorg. particle-dispersed fluoropolymer coating **composition** for antireflective **film**)

RE.CNT 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD  
 RE

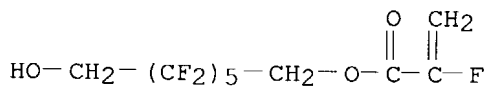
- (1) Nippon Kayaku Co Ltd; JP 04-164970 A 1992 HCAPLUS
- (2) Nof Corp; JP 06-306326 A 1994 HCAPLUS
- (3) Nof Corp; JP 11-174971 A 1999 HCAPLUS
- (4) Nof Corp; JP 11-43353 A 1999 HCAPLUS

IT **503831-49-0P**  
 RL: **IMF (Industrial manufacture)**; POF (Polymer in formulation);  
 PRP (Properties); TEM (Technical or engineered material use); **PREP (Preparation)**; USES (Uses)  
 (low-refractive-index layer containing; submicron inorg. particle-dispersed fluoropolymer coating **composition** for antireflective **film**)

RN 503831-49-0 HCAPLUS  
 CN 2-Propenoic acid, 2-fluoro-, 2,2,3,3,4,4,5,5,6,6-decafluoro-7-hydroxyheptyl ester, polymer with 2-isocyanatoethyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

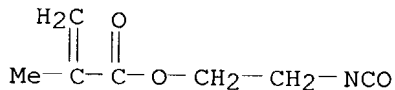
CM 1

CRN 503831-48-9  
 CMF C10 H7 F11 O3



CM 2

CRN 30674-80-7  
 CMF C7 H9 N O3



L36 ANSWER 2 OF 22 HCAPLUS COPYRIGHT 2003 ACS on STN  
 AN 2003:97162 HCAPLUS  
 DN 138:124028  
 ED Entered STN: 07 Feb 2003  
 TI Antiglare **radiation-curable** hard-coating **compositions** and soiling- and water-resistant resin products

having their coatings  
 IN Takahashi, Yasushi  
 PA Nippon ARC K. K., Japan  
 SO Jpn. Kokai Tokkyo Koho, 12 pp.  
 CODEN: JKXXAF  
 DT Patent  
 LA Japanese  
 IC ICM C09D004-00  
 ICS B32B027-00; C08F002-44; C09D005-00; C09D163-10; C09D167-07;  
 C09D175-16; C09D183-04; C09D183-08; G02B001-10  
 CC 42-10 (Coatings, Inks, and Related Products)  
 Section cross-reference(s): 74

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2003034761	A2	20030207	JP 2002-122266	20020424
PRAI	JP 2001-132131	A	20010427		
AB	The comps., useful for display panels, comprise (A) polyfunctional acrylates, (B) amino-containing functional silanes, (C) fluoroalkylsilanes, (D) colloidal SiO <sub>2</sub> , and (E) microparticles with average diameter 0.05-10 μm. Thus, a <b>composition</b> comprising trimethylolpropane triacrylate, γ-aminopropyltrimethoxysilane, colloidal SiO <sub>2</sub> (IPA-ST-ZL), perfluorooctylethyltriethoxysilane, and epoxy acrylate (3002M) was mixed with crystalline SiO <sub>2</sub> microparticles, applied on a polycarbonate plate (Panlite PC 1111), and cured to give a coating showing light transmittance 92%, haze 13%, pencil hardness 3H, contact angle to H <sub>2</sub> O 102°, and good adhesion to the substrate.				
ST	antiglare hard coating <b>radiation curable</b> display;				
	silica hard coating transparency display; antisoiling coating				
	fluoropolymer acrylic polysiloxane				
IT	Epoxy resins, uses				
	Polyesters, uses				
	Polyurethanes, uses				
	RL: TEM (Technical or engineered material use); USES (Uses)				
	(acrylic, comps. containing; antiglare <b>radiation-curable</b>				
	hard-coatings with good soiling and water resistance for displays)				
IT	Polysiloxanes, uses				
	RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)				
	(acrylic, primer; antiglare <b>radiation-curable</b>				
	hard-coatings with good soiling and water resistance for displays)				
IT	Polysiloxanes, uses				
	RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)				
	(acrylic-polyamine-, fluorine-containing, hard coat; antiglare <b>radiation-curable</b> hard-coatings with good soiling and water resistance for displays)				
IT	Polysiloxanes, uses				
	RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)				
	(acrylic-polyamine-polyether-, fluorine-containing, hard coat; antiglare <b>radiation-curable</b> hard-coatings with good soiling and water resistance for displays)				
IT	Polysiloxanes, uses				
	RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)				
	(acrylic-polyamine-polyether-, primer hard coat; antiglare <b>radiation-curable</b> hard-coatings with good soiling and				

- water resistance for displays)
- IT Fluoropolymers, uses  
 RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
 (acrylic-polyamine-polyether-polysiloxane-, hard coat; antiglare **radiation-curable** hard-coatings with good soiling and water resistance for displays)
- IT Polyethers, uses  
 RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
 (acrylic-polyamine-polysiloxane-, fluorine-containing, hard coat; antiglare **radiation-curable** hard-coatings with good soiling and water resistance for displays)
- IT Fluoropolymers, uses  
 RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
 (acrylic-polyamine-polysiloxane-, hard coat; antiglare **radiation-curable** hard-coatings with good soiling and water resistance for displays)
- IT Polyethers, uses  
 RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
 (acrylic-polyamine-polysiloxane-, primer hard coat; antiglare **radiation-curable** hard-coatings with good soiling and water resistance for displays)
- IT Polyamines  
 RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
 (acrylic-polyether-polysiloxane-, fluorine-containing, hard coat; antiglare **radiation-curable** hard-coatings with good soiling and water resistance for displays)
- IT Polyamines  
 RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
 (acrylic-polyether-polysiloxane-, primer hard coat; antiglare **radiation-curable** hard-coatings with good soiling and water resistance for displays)
- IT Polyamines  
 RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
 (acrylic-polysiloxane-, fluorine-containing, hard coat; antiglare **radiation-curable** hard-coatings with good soiling and water resistance for displays)
- IT Antireflective **films**  
 (antiglare **radiation-curable** hard-coatings with good soiling and water resistance for displays)
- IT Coating materials  
 (antisoiling, water-resistant; antiglare **radiation-curable** hard-coatings with good soiling and water resistance for displays)
- IT Transparent materials  
 (coatings; antiglare **radiation-curable** hard-coatings with good soiling and water resistance for displays)
- IT Coating materials  
 (**radiation-curable**; antiglare **radiation-curable** hard-coatings with good soiling and water resistance for displays)
- IT Polycarbonates, uses

RL: TEM (Technical or engineered material use); USES (Uses)  
 (substrate; antiglare **radiation-curable**  
 hard-coatings with good soiling and water resistance for displays)

IT Coating materials  
 (transparent; antiglare **radiation-curable**  
 hard-coatings with good soiling and water resistance for displays)

IT 7631-86-9, Silica, uses  
 RL: MOA (Modifier or additive use); TEM (Technical or engineered material  
 use); USES (Uses)  
 (Seahostar KE-W 50, amorphous, coatings containing; antiglare  
**radiation-curable** hard-coatings with good soiling and  
 water resistance for displays)

IT **490028-85-8P 490028-88-1P**  
 RL: **IMF (Industrial manufacture)**; TEM (Technical or engineered  
 material use); **PREP (Preparation)**; USES (Uses)  
 (hard coat; antiglare **radiation-curable**  
 hard-coatings with good soiling and water resistance for displays)

IT 490028-89-2P  
 RL: IMF (Industrial manufacture); TEM (Technical or engineered material  
 use); PREP (Preparation); USES (Uses)  
 (primer hard coat; antiglare **radiation-curable**  
 hard-coatings with good soiling and water resistance for displays)

IT 26936-30-1P, 3-Methacryloxypropyltrimethoxysilane-methyl methacrylate  
**copolymer**  
 RL: IMF (Industrial manufacture); TEM (Technical or engineered material  
 use); PREP (Preparation); USES (Uses)  
 (primer; antiglare **radiation-curable** hard-coatings  
 with good soiling and water resistance for displays)

IT 51909-90-1, Paraloid A 11  
 RL: TEM (Technical or engineered material use); USES (Uses)  
 (primer; antiglare **radiation-curable** hard-coatings  
 with good soiling and water resistance for displays)

IT 177403-51-9, Panlite PC 1111  
 RL: TEM (Technical or engineered material use); USES (Uses)  
 (substrate; antiglare **radiation-curable**  
 hard-coatings with good soiling and water resistance for displays)

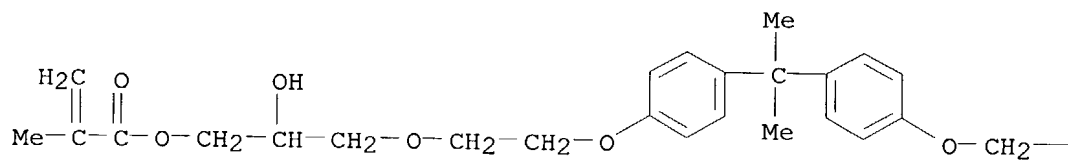
IT **490028-85-8P 490028-88-1P**  
 RL: **IMF (Industrial manufacture)**; TEM (Technical or engineered  
 material use); **PREP (Preparation)**; USES (Uses)  
 (hard coat; antiglare **radiation-curable**  
 hard-coatings with good soiling and water resistance for displays)

RN 490028-85-8 HCAPLUS

CM 1

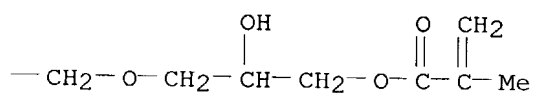
CRN 105650-07-5  
 CMF C35 H48 O10  
 CCI IDS

PAGE 1-A



2 ( D1-Me )

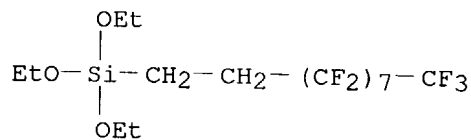
PAGE 1-B



CM 2

CRN 101947-16-4

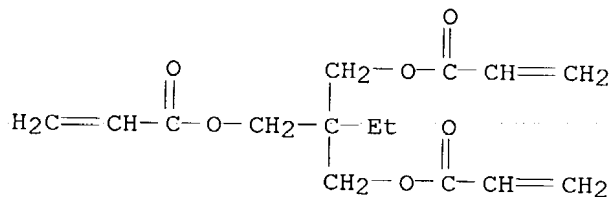
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CM 3

CRN 15625-89-5

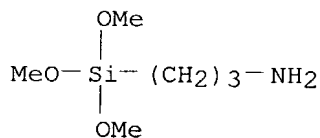
CMF C15 H20 O6



CM 4

CRN 13822-56-5

CMF C6 H17 N O3 Si



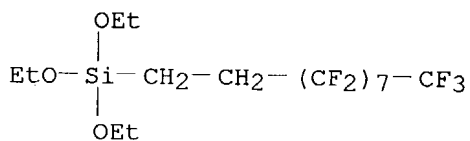
RN 490028-88-1 HCAPLUS

CN 2-Propenoic acid, 1,6-hexanediyl ester, polymer with triethoxy(3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,10-heptafluorodecyl)silane and 3-(trimethoxysilyl)-1-propanamine (9CI) (CA INDEX NAME)

CM 1

CRN 101947-16-4

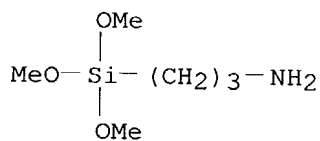
CMF C16 H19 F17 O3 Si



CM 2

CRN 13822-56-5

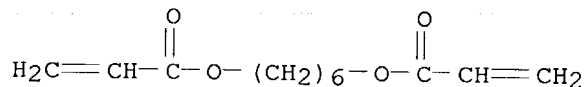
CMF C6 H17 N O3 Si



CM 3

CRN 13048-33-4

CMF C12 H18 O4



L36 ANSWER 3 OF 22 HCAPLUS COPYRIGHT 2003 ACS on STN

AN 2003:71243 HCAPLUS

DN 138:123626

KATHLEEN FULLER EIC 1700/PARKER LAW 308-4290

ED Entered STN: 29 Jan 2003  
 TI **Radiation-curable compositions** and  
 multilayer **films** therefrom  
 IN Kinoshita, Koji; Takano, Kiyoshi; Yamaguchi, Hirofumi; Nagao, Kenji  
 PA Dainippon Ink and Chemicals, Inc., Japan  
 SO Jpn. Kokai Tokkyo Koho, 15 pp.  
 CODEN: JKXXAF

DT Patent  
 LA Japanese  
 IC ICM C08F220-22  
 ICS B32B027-30; C08F220-04; C08F220-10; C08F222-00; C08F265-06;  
 C09D133-04; C09D133-16; G02B006-00; C09D004-02; C09D005-00  
 CC 38-3 (Plastics Fabrication and Uses)  
 Section cross-reference(s): 73

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2003026734	A2	20030129	JP 2001-215125	20010716
PRAI	JP 2001-215125		20010716		

AB The comps. comprise (A) F-containing acrylic compds. and/or their polymers and (B) functional group-containing (meth)acrylates and show refractive index  $\leq 1.50$  after cured. The multilayer **films** consist of  $\geq 3$  layers containing inner layer prepared from the comps. Thus, CH<sub>2</sub>:CHCO<sub>2</sub>CH<sub>2</sub>CH<sub>2</sub>C<sub>8</sub>F<sub>17</sub> (I) 91.8, dicyclopentenyl acrylate (II) 1.0, isobornyl acrylate (III) 7.0, and 2-hydroxy-2-methyl-1-phenyl-1-one (IV) 0.2 g were mixed and irradiated with UV to give a **copolymer** -monomer mixture, 100 g of which was stirred with I 2.5, II 0.5, III 0.2, neopentyl glycol diacrylate 2, 2-hydroxyethyl acrylate 2.5, and IV 0.5 g, degassed, filtered, and irradiated with UV in a glass mold to give a test piece showing refractive index 1.39, 450 nm transmittance 93%, and F content 54%.

ST fluoroalkyl acrylate polymer transparent multilayer **film**

IT Polycarbonates, uses  
 RL: PRP (Properties); TEM (Technical or engineered material use); USES (Uses)  
 (**film**; **radiation-curable** fluoroalkyl (meth)acrylate compns. for multilayer **films** with low refractive index and good transparency)

IT Polyesters, uses  
 RL: PRP (Properties); TEM (Technical or engineered material use); USES (Uses)  
 (**films**; **radiation-curable** fluoroalkyl (meth)acrylate compns. for multilayer **films** with low refractive index and good transparency)

IT Antireflective **films**  
 Laminated plastic **films**  
 Lenses  
 (**radiation-curable** fluoroalkyl (meth)acrylate compns. for multilayer **films** with low refractive index and good transparency)

IT Acrylic polymers, uses  
 RL: PRP (Properties); TEM (Technical or engineered material use); USES (Uses)  
 (sheets; **radiation-curable** fluoroalkyl (meth)acrylate compns. for multilayer **films** with low refractive index and good transparency)

IT 9020-32-0, Poly(ethylene naphthalate), monomer-based 9020-73-9, Poly(ethylene naphthalate)



RL: PRP (Properties); TEM (Technical or engineered material use); USES (Uses)

(film; radiation-curable fluoroalkyl (meth)acrylate compns. for multilayer films with low refractive index and good transparency)

IT 489467-82-5P 489467-83-6P 489467-84-7P  
489467-85-8P 489467-86-9P 489467-87-0P  
489467-88-1P 489467-89-2P 489467-90-5P

RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(radiation-curable fluoroalkyl (meth)acrylate compns. for multilayer films with low refractive index and good transparency)

IT 489467-82-5P 489467-83-6P 489467-84-7P  
489467-85-8P 489467-86-9P 489467-87-0P  
489467-88-1P 489467-89-2P 489467-90-5P

RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(radiation-curable fluoroalkyl (meth)acrylate compns. for multilayer films with low refractive index and good transparency)

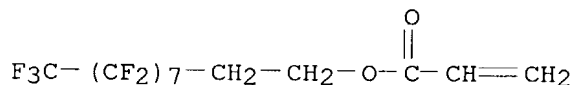
RN 489467-82-5 HCAPLUS

CN 2-Propenoic acid, 2,2-dimethyl-1,3-propanediyl ester, polymer with 3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,10-heptadecafluorodecyl 2-propenoate, 3a,4,7,7a,?,?-hexahydro-4,7-methano-1H-indenyl 2-propenoate, 2-hydroxyethyl 2-propenoate and rel-(1R,2R,4R)-1,7,7-trimethylbicyclo[2.2.1]hept-2-yl 2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 27905-45-9

CMF C13 H7 F17 O2

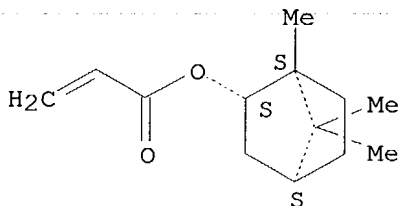


CM 2

CRN 5888-33-5

CMF C13 H20 O2

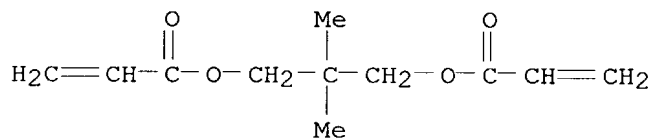
Relative stereochemistry.



CM 3

CRN 2223-82-7

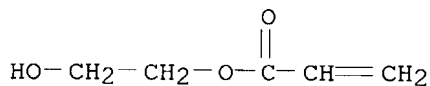
CMF C11 H16 O4



CM 4

CRN 818-61-1

CMF C5 H8 O3



CM 5

CRN 12542-30-2

CMF C13 H16 O2

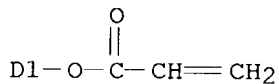
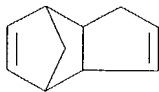
CCI IDS

CM 6

CRN 50976-02-8

CMF C13 H14 O2

CCI IDS

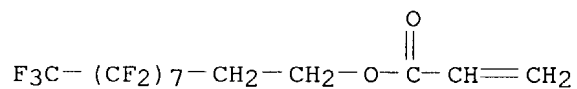


RN 489467-83-6 HCAPLUS

CN 2-Propenoic acid, polymer with 2,2-dimethyl-1,3-propanediyl di-2-propenoate, 3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,10-heptadecafluorodecyl 2-propenoate, 3a,4,7,7a,?,?-hexahydro-4,7-methano-1H-indenyl 2-propenoate and rel-(1R,2R,4R)-1,7,7-trimethylbicyclo[2.2.1]hept-2-yl 2-propenoate (9CI) (CA INDEX NAME)

CM 1

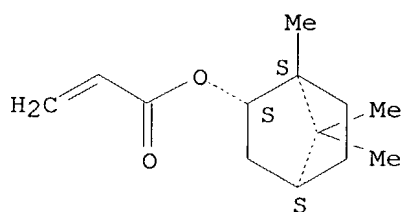
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CMF C13 H7 F17 O2



CM 2

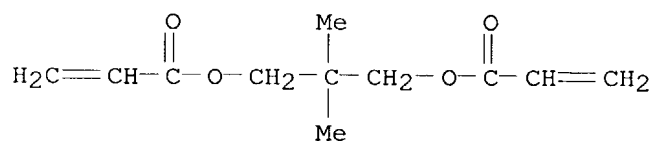
CRN 5888-33-5  
CMF C13 H20 O2

Relative stereochemistry.



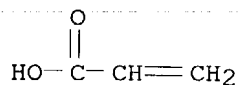
CM 3

CRN 2223-82-7  
CMF C11 H16 O4



CM 4

CRN 79-10-7  
CMF C3 H4 O2



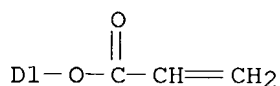
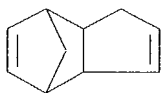
CM 5

CRN 12542-30-2

CMF C13 H16 O2  
CCI IDS

CM 6

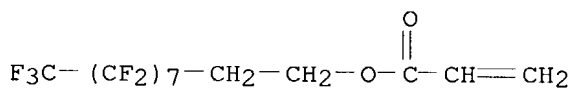
CRN 50976-02-8  
CMF C13 H14 O2  
CCI IDS



RN 489467-84-7 HCAPLUS  
CN 2-Propenoic acid, 2,2-dimethyl-1,3-propanediyl ester, polymer with  
2-(dimethylamino)ethyl 2-propenoate, 3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,10-  
heptafluorodecyl 2-propenoate, 3a,4,7,7a,?,?-hexahydro-4,7-methano-1H-  
indenyl 2-propenoate and rel-(1R,2R,4R)-1,7,7-trimethylbicyclo[2.2.1]hept-  
2-yl 2-propenoate (9CI) (CA INDEX NAME)

CM 1

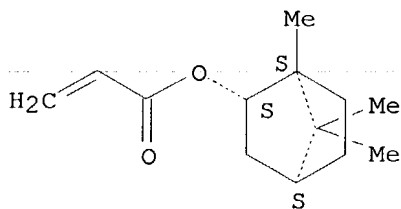
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CM 2

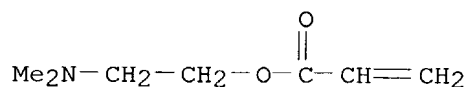
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CMF C13 H20 O2

Relative stereochemistry.



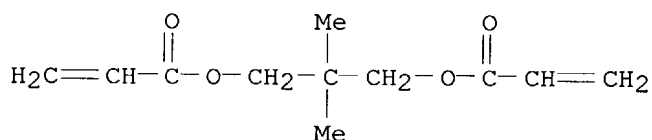
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CMF C7 H13 N O2



CM 4

CRN 2223-82-7  
CMF C11 H16 O4

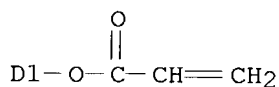
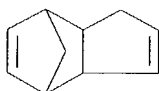


CM 5

CRN 12542-30-2  
CMF C13 H16 O2  
CCI IDS

CM 6

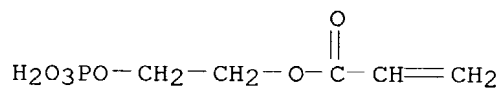
CRN 50976-02-8  
CMF C13 H14 O2  
CCI IDS



RN 489467-85-8 HCAPLUS  
CN 2-Propenoic acid, 2,2-dimethyl-1,3-propanediyl ester, polymer with 3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,10-heptadecafluorodecyl 2-propenoate, 3a,4,7,7a,?,?-hexahydro-4,7-methano-1H-indenyl 2-propenoate, 2-(phosphonooxy)ethyl 2-propenoate and rel-(1R,2R,4R)-1,7,7-trimethylbicyclo[2.2.1]hept-2-yl 2-propenoate (9CI) (CA INDEX NAME)

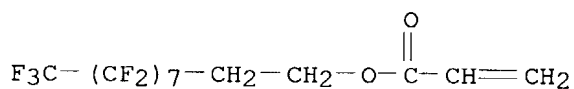
CM 1

CRN 32120-16-4  
CMF C5 H9 O6 P



CM 2

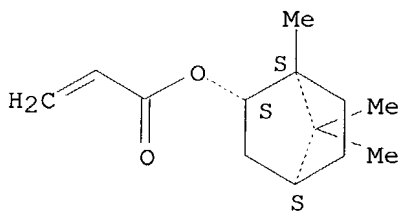
CRN 27905-45-9  
CMF C13 H7 F17 O2



CM 3

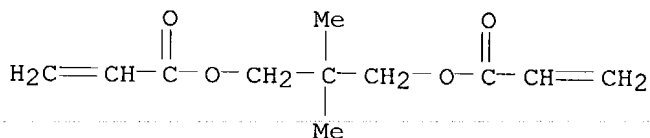
CRN 5888-33-5  
CMF C13 H20 O2

Relative stereochemistry.



CM 4

CRN 2223-82-7  
CMF C11 H16 O4

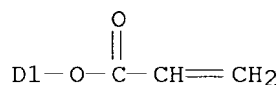
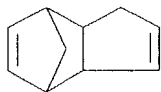


CM 5

CRN 12542-30-2  
CMF C13 H16 O2  
CCI IDS

CM 6

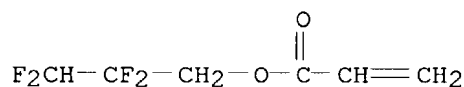
CRN 50976-02-8  
CMF C13 H14 O2  
CCI IDS



RN 489467-86-9 HCAPLUS  
CN 2-Propenoic acid, 2,2-dimethyl-1,3-propanediyl ester, polymer with  
3a,4,7,7a,?,?-hexahydro-4,7-methano-1H-indenyl 2-propenoate,  
2-hydroxyethyl 2-propenoate, 2,2,3,3-tetrafluoropropyl 2-propenoate and  
rel-(1R,2R,4R)-1,7,7-trimethylbicyclo[2.2.1]hept-2-yl 2-propenoate (9CI)  
(CA INDEX NAME)

CM 1

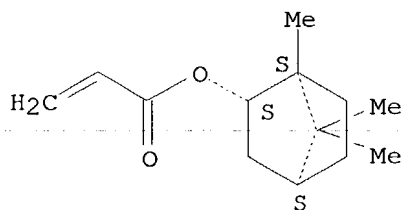
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CMF C6 H6 F4 O2



CM 2

CRN 5888-33-5  
CMF C13 H20 O2

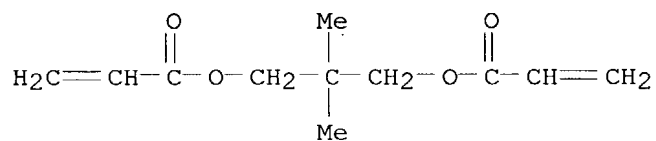
Relative stereochemistry.



CM 3

CRN 2223-82-7

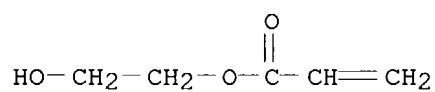
CMF C11 H16 O4



CM 4

CRN 818-61-1

CMF C5 H8 O3



CM 5

CRN 12542-30-2

CMF C13 H16 O2

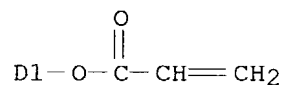
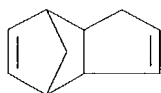
CCI IDS

CM 6

CRN 50976-02-8

CMF C13 H14 O2

CCI IDS



RN 489467-87-0 HCAPLUS

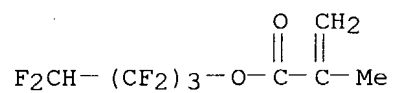
CN 2-Propenoic acid, 2-methyl-, 1,1,2,2,3,3,4,4-octafluorobutyl ester, polymer with 2,2-dimethyl-1,3-propanediyl di-2-propenoate, 3a,4,7,7a,?,?-hexahydro-4,7-methano-1H-indenyl 2-propenoate, 2-hydroxyethyl 2-propenoate and rel-(1R,2R,4R)-1,7,7-trimethylbicyclo[2.2.1]hept-2-yl 2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 45212-62-2

CMF C8 H6 F8 O2



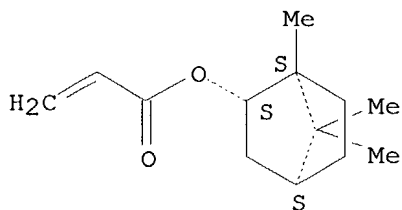


CM 2

CRN 5888-33-5

CMF C13 H20 O2

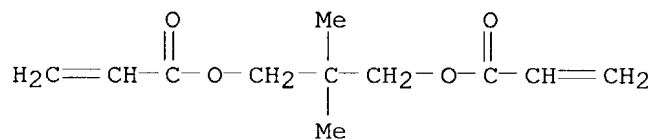
Relative stereochemistry.



CM 3

CRN 2223-82-7

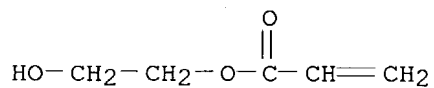
CMF C11 H16 O4



CM 4

CRN 818-61-1

CMF C5 H8 O3



CM 5

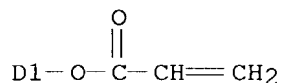
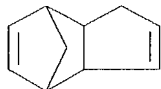
CRN 12542-30-2

CMF C13 H16 O2

CCI IDS

CM 6

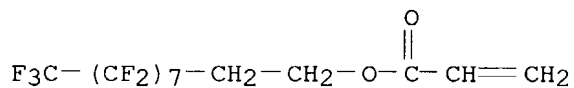
CRN 50976-02-8  
CMF C13 H14 O2  
CCI IDS



RN 489467-88-1 HCAPLUS  
CN 2-Propenoic acid, 2,2-dimethyl-1,3-propanediyl ester, polymer with  
3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,10-heptadecafluorodecyl 2-propenoate,  
3a,4,7,7a,?,?-hexahydro-4,7-methano-1H-indenyl 2-propenoate,  
4-hydroxybutyl 2-propenoate and rel-(1R,2R,4R)-1,7,7-  
trimethylbicyclo[2.2.1]hept-2-yl 2-propenoate (9CI) (CA INDEX NAME)

CM 1

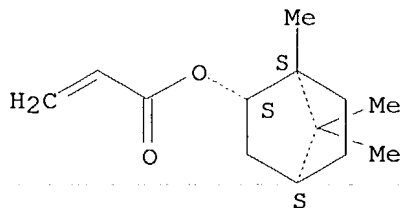
CRN 27905-45-9  
CMF C13 H7 F17 O2



CM 2

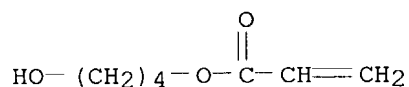
CRN 5888-33-5  
CMF C13 H20 O2

Relative stereochemistry.



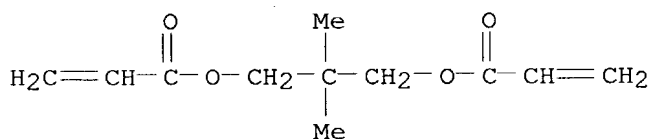
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CRN 2478-10-6  
CMF C7 H12 O3



CM 4

CRN 2223-82-7  
CMF C11 H16 O4

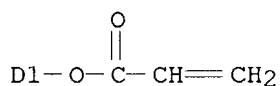
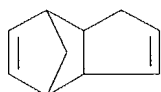


CM 5

CRN 12542-30-2  
CMF C13 H16 O2  
CCI IDS

CM 6

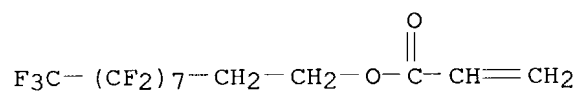
CRN 50976-02-8  
CMF C13 H14 O2  
CCI IDS



RN 489467-89-2 HCAPLUS  
CN 2-Propenoic acid, 2,2-dimethyl-1,3-propanediyl ester, polymer with  
3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,10-heptadecafluorodecyl 2-propenoate,  
3a,4,7,7a,?,?-hexahydro-4,7-methano-1H-indenyl 2-propenoate,  
4-hydroxybutyl 2-propenoate, 2-hydroxyethyl 2-propenoate and  
rel-(1R,2R,4R)-1,7,7-trimethylbicyclo[2.2.1]hept-2-yl 2-propenoate (9CI)  
(CA INDEX NAME)

CM 1

CRN 27905-45-9  
CMF C13 H7 F17 O2

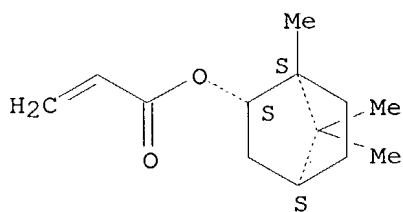


CM 2

CRN 5888-33-5

CMF C13 H20 O2

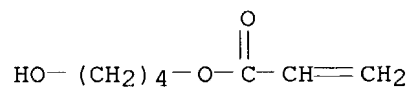
Relative stereochemistry.



CM 3

CRN 2478-10-6

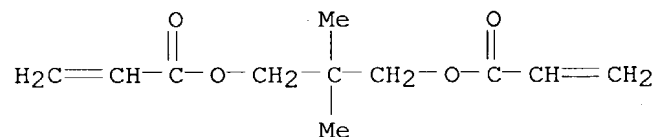
CMF C7 H12 O3



CM 4

CRN 2223-82-7

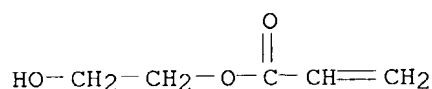
CMF C11 H16 O4



CM 5

CRN 818-61-1

CMF C5 H8 O3



CM 6

CRN 12542-30-2

CMF C13 H16 O2

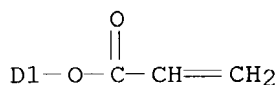
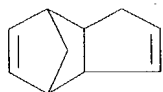
CCI IDS

CM 7

CRN 50976-02-8

CMF C13 H14 O2

CCI IDS



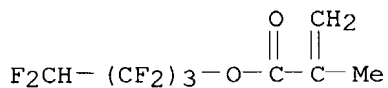
RN 489467-90-5 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, 1,1,2,2,3,3,4,4-octafluorobutyl ester, polymer with 2,2-dimethyl-1,3-propanediyl di-2-propenoate, 3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,10-heptadecafluorodecyl 2-propenoate, 3a,4,7,7a,?,?-hexahydro-4,7-methano-1H-indenyl 2-propenoate, 4-hydroxybutyl 2-propenoate and rel-(1R,2R,4R)-1,7,7-trimethylbicyclo[2.2.1]hept-2-yl 2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 45212-62-2

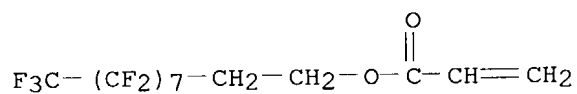
CMF C8 H6 F8 O2



CM 2

CRN 27905-45-9

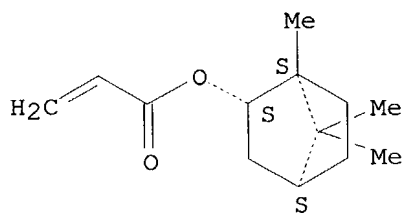
CMF C13 H7 F17 O2



CM 3

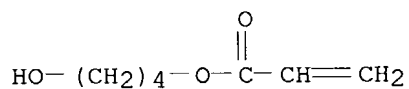
CRN 5888-33-5  
CMF C13 H20 O2

Relative stereochemistry.



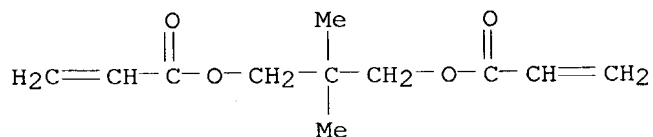
CM 4

CRN 2478-10-6  
CMF C7 H12 O3



CM 5

CRN 2223-82-7  
CMF C11 H16 O4

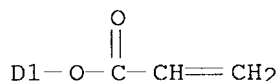
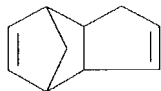


CM 6

CRN 12542-30-2  
CMF C13 H16 O2  
CCI IDS

CM 7

CRN 50976-02-8  
CMF C13 H14 O2  
CCI IDS



L36 ANSWER 4 OF 22 HCAPLUS COPYRIGHT 2003 ACS on STN  
AN 2002:754496 HCAPLUS  
DN 137:280751  
ED Entered STN: 04 Oct 2002  
TI Water-repellent, antireflective, fouling- and scratch-resistant coating  
**compositions** for surface protection of inorganic/organic  
composites and devices thereof  
IN Satoh, Kazuyuki; Sakai, Mihoko; Araki, Takayuki  
PA Daikin Industries, Ltd., Japan  
SO PCT Int. Appl., 68 pp.  
CODEN: PIXXD2  
DT Patent  
LA Japanese  
IC ICM C09K003-00  
ICS C09D185-00; C09D133-16; G02B001-10; B32B027-30  
CC 42-10 (Coatings, Inks, and Related Products)  
Section cross-reference(s): 73, 74

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2002077116	A1	20021003	WO 2002-JP2646	20020320
	W: JP, US				
	RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR				

PRAI JP 2001-80352 A 20010321

AB The **radiation-curable** and transparent compns. comprise: (A) a hydrolyzable metal alkoxide or the hydrolyzate thereof, (B) a perfluoroalkyl compound having a functional group reactive with A, (C) an adhesion improver, and optionally (D) a polymer having C1-10 perfluoroalkyl pendants with or without groups of amino, carboxyl, isocyanato, OH, and glycidyl. Thus, hydrolytic polymerizing 24.4 parts tetraethoxysilane with 7.4 parts heptadecylfluoro-1,1,2,2-tetrahydrodecyltriethoxysilane in H<sub>2</sub>O/Et-OH mixture solvent in the presence of 0.05 g nitric acid and 1.2 parts PMMA gave a title **composition**, which was spin-coated on an untreated PET substrate and cured under high-pressure Hg lamp to give a **film** sample showing claimed properties.

ST perfluoroalkyl compd hydrolyzable alkoxide fouling resistant coating **compn**; tetraethoxysilane water repellent antireflective transparent coating **compn**; inorg org composite device antireflective **radiation curable** coating **compn**

- IT Polysiloxanes, uses  
 RL: IMF (Industrial manufacture); PEP (Physical, engineering or chemical process); POF (Polymer in formulation); PRP (Properties); PYP (Physical process); TEM (Technical or engineered material use); PREP (Preparation); PROC (Process); USES (Uses)  
 (acrylic, fluoroalkyl group-containing; in water-repellent, antireflective, fouling- and scratch-resistant coating compns. for surface protection of inorg./organic composites)
- IT Fluoropolymers, uses  
 RL: IMF (Industrial manufacture); PEP (Physical, engineering or chemical process); POF (Polymer in formulation); PRP (Properties); PYP (Physical process); TEM (Technical or engineered material use); PREP (Preparation); PROC (Process); USES (Uses)  
 (acrylic-polysiloxane-, fluoroalkyl group-containing; in water-repellent, antireflective, fouling- and scratch-resistant coating compns. for surface protection of inorg./organic composites)
- IT Coating materials  
 (antisoiling; for surface protection of inorg./organic composites)
- IT Transparent materials  
 (coatings; for surface protection of inorg./organic composites)
- IT Antireflective **films**  
 (for surface protection of inorg./organic composites)
- IT Fluoropolymers, uses  
 RL: IMF (Industrial manufacture); PEP (Physical, engineering or chemical process); POF (Polymer in formulation); PRP (Properties); PYP (Physical process); TEM (Technical or engineered material use); PREP (Preparation); PROC (Process); USES (Uses)  
 (in water-repellent, antireflective, fouling- and scratch-resistant coating compns. for surface protection of inorg./organic composites)
- IT Composites  
 (inorg./organic; surface protection using coatingperfluoroalkyl-containing acrylic-siloxane compns.)
- IT Polysiloxanes, uses  
 RL: IMF (Industrial manufacture); PEP (Physical, engineering or chemical process); POF (Polymer in formulation); PRP (Properties); PYP (Physical process); TEM (Technical or engineered material use); PREP (Preparation); PROC (Process); USES (Uses)  
 (polyether-, fluorine-containing; in water-repellent, antireflective, fouling- and scratch-resistant coating compns. for surface protection of inorg./organic composites)
- IT Fluoropolymers, uses  
 RL: IMF (Industrial manufacture); PEP (Physical, engineering or chemical process); POF (Polymer in formulation); PRP (Properties); PYP (Physical process); TEM (Technical or engineered material use); PREP (Preparation); PROC (Process); USES (Uses)  
 (polyether-siloxane-; in water-repellent, antireflective, fouling- and scratch-resistant coating compns. for surface protection of inorg./organic composites)
- IT Coating materials  
 (**radiation-curable**; for surface protection of inorg./organic composites)
- IT Coating materials  
 (scratch-resistant; for surface protection of inorg./organic composites)
- IT Polysiloxanes, uses  
 RL: IMF (Industrial manufacture); PEP (Physical, engineering or chemical process); POF (Polymer in formulation); PRP (Properties); PYP (Physical process); TEM (Technical or engineered material use); PREP (Preparation); PROC (Process); USES (Uses)



- (silicate-, fluorine-containing; in water-repellent, antireflective, fouling- and scratch-resistant coating compns. for surface protection of inorg./organic composites)
- IT Polyethers, uses  
 RL: IMF (Industrial manufacture); PEP (Physical, engineering or chemical process); POF (Polymer in formulation); PRP (Properties); PYP (Physical process); TEM (Technical or engineered material use); PREP (Preparation); PROC (Process); USES (Uses)  
 (siloxane-, fluorine-containing; in water-repellent, antireflective, fouling- and scratch-resistant coating compns. for surface protection of inorg./organic composites)
- IT Acrylic polymers, miscellaneous  
 Polycarbonates, miscellaneous  
 Polyesters, miscellaneous  
 Polyolefins  
 RL: MSC (Miscellaneous)  
 (substrate; surface protection using coatingperfluoroalkyl-containing acrylic-siloxane compns.)
- IT Hybrid organic-inorganic materials  
 Optical instruments  
 (surface protection using coatingperfluoroalkyl-containing acrylic-siloxane compns.)
- IT Coating materials  
 (transparent; for surface protection of inorg./organic composites)
- IT 9011-14-7, PMMA 466693-00-5  
 RL: POF (Polymer in formulation); TEM (Technical or engineered material use); USES (Uses)  
 (adhesion improver; in water-repellent, antireflective, fouling- and scratch-resistant coating compns. for surface protection of inorg./organic composites)
- IT 26936-30-1P,  $\gamma$ -Methacryloxypropyltrimethoxysilane-methyl methacrylate **copolymer**  
 RL: IMF (Industrial manufacture); POF (Polymer in formulation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
 (adhesion improver; prepn. of perfluoroalkyl compds. for water-repellent, antireflective, fouling- and scratch-resistant coating compns.)
- IT 75-94-5, Vinyltrichlorosilane 110-05-4, Di-tert-butyl peroxide 60556-85-6 126870-64-2 174082-85-0  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (in prepn. of perfluoroalkyl compds. for water-repellent, antireflective, fouling- and scratch-resistant coating compns.)
- IT 67-56-1DP, Methanol, reaction products with polysiloxanes  
**330977-29-2P 466692-98-8DP**, reaction product with methanol **466692-99-9DP**, reaction product with methanol  
 RL: **IMF (Industrial manufacture)**; PEP (Physical, engineering or chemical process); POF (Polymer in formulation); PRP (Properties); PYP (Physical process); TEM (Technical or engineered material use); **PREP (Preparation)**; PROC (Process); USES (Uses)  
 (in water-repellent, antireflective, fouling- and scratch-resistant coating compns. for surface protection of inorg./organic composites)
- IT **466692-97-7DP**, reaction products with methanol  
 RL: **IMF (Industrial manufacture)**; RCT (Reactant); **PREP (Preparation)**; RACT (Reactant or reagent)  
 (monomer; in prepn. of perfluoroalkyl compds. for water-repellent, antireflective, fouling- and scratch-resistant coating compns.)
- IT **402913-60-4P**  
 RL: **IMF (Industrial manufacture)**; POF (Polymer in formulation);

TEM (Technical or engineered material use); **PREP (Preparation)**;  
USES (Uses)

(prepns. of perfluoroalkyl compds. for water-repellent, antireflective, fouling- and scratch-resistant coating compns.)

IT 9012-09-3, Triacetylcellulose 25038-59-9, Polyethylene terephthalate, miscellaneous

RL: MSC (Miscellaneous)

(substrate; surface protection using coatingperfluoroalkyl-containing acrylic-siloxane compns.)

RE.CNT 11 THERE ARE 11 CITED REFERENCES AVAILABLE FOR THIS RECORD  
RE

- (1) Asahi Glass Co Ltd; JP 05279499 A 1992 HCAPLUS
- (2) Asahi Glass Co Ltd; EP 513690 A2 1992 HCAPLUS
- (3) Daikin Industries Ltd; JP 09157388 A 1998 HCAPLUS
- (4) Daikin Industries Ltd; EP 844265 A1 1998 HCAPLUS
- (5) Daikin Industries Ltd; WO 977155 A1 1998
- (6) Dainippon Printing Co Ltd; JP 60156731 A 1985 HCAPLUS
- (7) Fuji Photo Film Co Ltd; JP 11106704 A 2000 HCAPLUS
- (8) Fuji Photo Film Co Ltd; US 6129980 A 2000 HCAPLUS
- (9) Fuji Photo Film Co Ltd; JP 200142102 A 2001
- (10) Nippon Kayaku Co Ltd; JP 10104403 A 1998 HCAPLUS
- (11) Shin-Etsu Chemical Co Ltd; JP 06256756 A 1994 HCAPLUS

IT **330977-29-2P 466692-98-8DP**, reaction product with methanol **466692-99-9DP**, reaction product with methanol

RL: **IMF (Industrial manufacture)**; PEP (Physical, engineering or chemical process); POF (Polymer in formulation); PRP (Properties); PYP (Physical process); TEM (Technical or engineered material use); **PREP (Preparation)**; PROC (Process); USES (Uses)

(in water-repellent, antireflective, fouling- and scratch-resistant coating compns. for surface protection of inorg./organic composites)

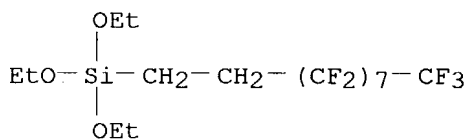
RN 330977-29-2 HCAPLUS

CN Silicic acid (H4SiO4), tetraethyl ester, polymer with triethoxy(3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,10-heptafluorodecyl)silane (9CI) (CA INDEX NAME)

CM 1

CRN 101947-16-4

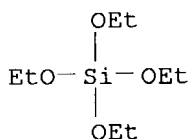
CMF C16 H19 F17 O3 Si



CM 2

CRN 78-10-4

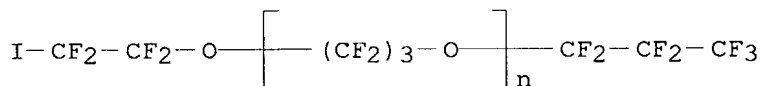
CMF C8 H20 O4 Si



RN 466692-98-8 HCAPLUS  
 CN Silicic acid (H4SiO4), tetraethyl ester, polymer with  $\alpha$ -(heptafluoropropyl)- $\omega$ -(1,1,2,2-tetrafluoro-2-iodoethoxy)poly[oxy(1,1,2,2,3,3-hexafluoro-1,3-propanediyl)] and trichloroethenylsilane (9CI) (CA INDEX NAME)

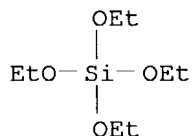
CM 1

CRN 126870-64-2  
 CMF (C3 F6 O)<sub>n</sub> C5 F11 I O  
 CCI PMS



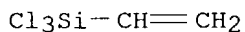
CM 2

CRN 78-10-4  
 CMF C8 H20 O4 Si



CM 3

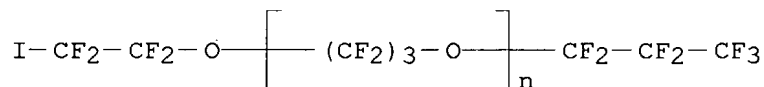
CRN 75-94-5  
 CMF C2 H3 Cl3 Si



RN 466692-99-9 HCAPLUS  
 CN Silicic acid (H4SiO4), tetraethyl ester, polymer with  $\alpha$ -(heptafluoropropyl)- $\omega$ -(1,1,2,2-tetrafluoro-2-iodoethoxy)poly[oxy(1,1,2,2,3,3-hexafluoro-1,3-propanediyl)], trichloroethenylsilane and triethoxy(3-isocyanatopropyl)silane (9CI) (CA INDEX NAME)

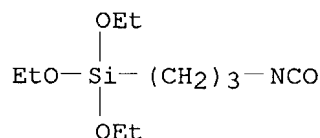
CM 1

CRN 126870-64-2  
 CMF (C3 F6 O)<sub>n</sub> C5 F11 I O  
 CCI PMS



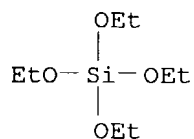
CM 2

CRN 24801-88-5  
 CMF C10 H21 N O4 Si



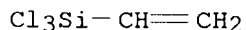
CM 3

CRN 78-10-4  
 CMF C8 H20 O4 Si



CM 4

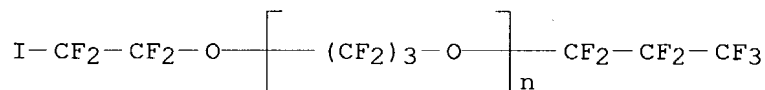
CRN 75-94-5  
 CMF C2 H3 Cl3 Si



IT 466692-97-7DP, reaction products with methanol  
 RL: IMF (Industrial manufacture); RCT (Reactant); PREP  
 (Preparation); RACT (Reactant or reagent)  
 (monomer; in preps. of perfluoroalkyl compds. for water-repellent,  
 antireflective, fouling- and scratch-resistant coating compns.)  
 RN 466692-97-7 HCAPLUS  
 CN Silane, trichloroethenyl-, polymer with  $\alpha$ -(heptafluoropropyl)-  
 $\omega$ -(1,1,2,2-tetrafluoro-2-iodoethoxy)poly[oxy(1,1,2,2,3,3-hexafluoro-  
 1,3-propanediyl)] (9CI) (CA INDEX NAME)

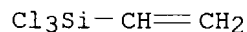
CM 1

CRN 126870-64-2  
CMF (C3 F6 O)n C5 F11 I O  
CCI PMS



CM 2

CRN 75-94-5  
CMF C2 H3 Cl3 Si



IT 402913-60-4P

RL: IMF (Industrial manufacture); POF (Polymer in formulation);

TEM (Technical or engineered material use); PREP (Preparation);

USES (Uses)

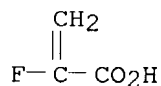
(preps. of perfluoroalkyl compds. for water-repellent, antireflective, fouling- and scratch-resistant coating compns.)

RN 402913-60-4 HCAPLUS

CN 1-Propanol, 2,3,3,3-tetrafluoro-2-[1,1,2,3,3,3-hexafluoro-2-[(1,1,2-trifluoro-2-propenyl)oxy]propoxy]-, homopolymer, 2-fluoro-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 430-99-9  
CMF C3 H3 F O2

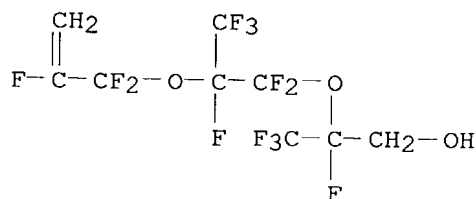


CM 2

CRN 292163-49-6  
CMF (C9 H5 F13 O3)x  
CCI PMS

CM 3

CRN 174082-85-0  
CMF C9 H5 F13 O3



L36 ANSWER 5 OF 22 HCAPLUS COPYRIGHT 2003 ACS on STN

AN 2002:616377 HCAPLUS

DN 137:156204

ED Entered STN: 16 Aug 2002

TI **Radiation-curable** composition, **cured** coating film with good abrasion resistance, transparency, antifouling and antiblocking property and coated substrate

IN Ishizeki, Kenji; Yamamoto, Hirotsugu; Yamamoto, Yuichi

PA Asahi Glass Company, Limited, Japan

SO U.S. Pat. Appl. Publ., 10 pp.

CODEN: USXXCO

DT Patent

LA English

IC ICM C08J003-28

NCL 522120000

CC 42-10 (Coatings, Inks, and Related Products)

FAN.CNT 1

*applicant  
no fluoropolymers  
structures are  
indeped*

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 2002111391	A1	20020815	US 2001-19	20011204
	JP 2002241446	A2	20020828	JP 2001-327644	20011025
PRAI	JP 2000-375748	A	20001211		
	JP 2001-327644	A	20011025		

AB The composition comprises a compound (A) having  $\geq 1$  active energy ray curable polymerizable functional group, a fluorine-containing copolymer (B) obtained by (1) copolyng. a polymerizable monomer (a) having a **polyfluoroalkyl** group and a polymerizable monomer (b) having a **photocurable functional group**, or (2) introducing a **photocurable functional group** into a fluorine-containing copolymer (D) obtained by copolyng. a polymerizable monomer (a) having a **polyfluoroalkyl** group and a polymerizable monomer (d) having a group capable of introducing a **photocurable functional group**, and a **photopolymer** initiator (C). Thus, coating a solution containing Bu acetate 60, i-PrOH 20, dipentaerythritol hexaacrylate 10, tris(acryloxyethyl) isocyanurate 10, 2-methyl-1-[4-(methylthio)phenyl]-2-morpholinopropan-1-one 0.6, 2-[2-hydroxy-5-(2-acryloyloxyethyl)phenyl]benzotriazole 0.5, BYK-306 (silicone type leveling agent) 0.1, N-(2-aminoethyl)-3-aminopropyltrimethoxysilane 0.2 g and a F-containing copolymer 0.2 g on a substrate, drying at 90° for 5 min and irradiating with UV rays gave a coat film with good claimed properties.

ST UV curable acrylic fluoropolymer coating antiblocking antifouling transparency film

IT Fluoropolymers, uses

RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(acrylic; **radiation-curable** composition, **cured** coating film with good abrasion resistance, transparency, antifouling

- and antiblocking property and coated substrate)
- IT Coating materials  
(antisoiling; **radiation-curable** composition,  
**cured** coating film with good abrasion resistance, transparency,  
antifouling and antiblocking property and coated substrate)
- IT Coating materials  
(blocking-resistant; **radiation-curable** composition,  
**cured** coating film with good abrasion resistance, transparency,  
antifouling and antiblocking property and coated substrate)
- IT 71868-10-5, 2-Methyl-1-[4-(methylthio)phenyl]-2-morpholinopropan-1-one  
RL: CAT (Catalyst use); USES (Uses)  
(photoinitiator; **radiation-curable** composition,  
**cured** coating film with good abrasion resistance, transparency,  
antifouling and antiblocking property and coated substrate)
- IT 79-10-7DP, Acrylic acid, perfluorinated alkyl-containing ester compds.,  
copolymers with vinyl monomers 141-32-2DP, Butyl acrylate, copolymer  
with F-containing vinyl compds. and other vinyl monomers 818-61-1DP,  
2-Hydroxyethyl acrylate, copolymer with F-containing vinyl compds. and other  
vinyl monomers 1866-31-5DP, Allyl cinnamate, copolymer with F-containing  
vinyl compds. and other vinyl monomers 4813-57-4DP, Stearyl acrylate,  
copolymer with F-containing vinyl compds. and other vinyl monomers  
29570-58-9DP, Dipentaerythritol hexaacrylate, copolymer with F-containing  
vinyl compds. and other vinyl monomers 51247-77-9DP, Polypropylene  
glycol monobutyl ether acrylate, copolymer with F-containing vinyl compds. and  
other vinyl monomers 115753-22-5DP, Tris(acryloyloxyethyl) isocyanurate,  
copolymer with F-containing vinyl compds. and other vinyl monomers  
RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or  
engineered material use); PREP (Preparation); USES (Uses)  
(**radiation-curable** composition, **cured** coating  
film with good abrasion resistance, transparency, antifouling and  
antiblocking property and coated substrate)

L36 ANSWER 6 OF 22 HCAPLUS COPYRIGHT 2003 ACS on STN  
AN 2002:171969 HCAPLUS  
DN 136:233006  
ED Entered STN: 08 Mar 2002  
TI **Radiation-curable** fluoropolymer **compositions**  
and antireflection **films** made from them  
IN Araki, Takayuki; Sakai, Mihoko; Tanaka, Yoshito; Shimizu, Tetsuo  
PA Daikin Industries, Ltd., Japan  
SO PCT Int. Appl., 113 pp.  
CODEN: PIXXD2  
DT Patent  
LA Japanese  
IC ICM C08F008-14  
ICS C08F006-12  
CC 37-3 (Plastics Manufacture and Processing)  
Section cross-reference(s): 38, 42  
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI WO 2002018457	A1	20020307	WO 2001-JP7344	20010828
W: JP, KR, US				
RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR				
TW 526213	B	20030401	TW 2001-90121173	20010828
EP 1347001	A1	20030924	EP 2001-958540	20010828
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,				

IE, FI, CY, TR

PRAI JP 2000-259583 A 20000829  
 JP 2000-303723 A 20001003  
 JP 2001-73025 A 20010314  
 WO 2001-JP7344 W 20010828

AB The compns. contain curable fluoropolymers of -A-M- type [M = CX1X2CRX3 provided that R = (CX4X5)a(C:O)bOcRf; where X1 and X2 each is H or F; X3 is H, F, CH3, or CF3; and X4 and X5 each is H, F, or CF3; Rf is an organic group consisting of a C1-40 fluoroalkyl group or C2-100 fluoroalkyl group having an ether bond and, bonded to the fluoroalkyl group, one to three Yls (Y1 is a C2-10 monovalent organic group having an ethylenically unsatd. C-C double bond at a terminal); a = 0-3; b, c = 0 or 1; A = a structural unit derived from a monomer **copolymerizable** with the ethylenic fluoromonomer represented by the formula M] at 0.1-100 mol M and 0-99.9 mol A, and having a number-average mol. weight of 500 to 1,000,000. Thus,

mixing

20.4 g perfluoro(1,1,9,9-tetrahydro-2,5-bistrifluoromethyl-3,6-dioxanonenol) with 21.2 g a 8.0% [H(CF2CF2)3COO]2 perfluorohexane solution under N at 20° for 24 h gave a polymer (I) having number-average mol. weight (Mn) 9000 and weight-average mol. weight (Mw) 22,000. Dissolving 5.0 g the I

with

1.0 g pyridine in 80 mL Et2O, cooling to 5°, adding 1.0 g CH2:CFCOF dissolved in 20 mL over 30 min while flushing with N and stirring, warming to room temperature, mixing for 4 h and working up gave a modified I which can be **cured** by UV **radiation** in the presence of a photoinitiator.

ST fluoroacryloyl pendant allyl fluoro ether polymer curable antireflection **film**; UV **radiation curable** antireflection **film** coating acrylic fluoropolymer

IT Fluoropolymers, preparation

RL: IMF (Industrial manufacture); POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
 (acrylic; curable fluoropolymer compns. and antireflection **films** made from them)

IT Polyesters, properties

RL: PRP (Properties); TEM (Technical or engineered material use); USES (Uses)  
 (antireflection base **film**; curable fluoropolymer compns. and antireflection **films** made from them)

IT UV **radiation**

(crosslinking by; **curable** fluoropolymer compns. and antireflection **films** made from them)

IT Antireflective **films**

(curable fluoropolymer compns. and antireflection **films** made from them)

IT Polyethers, properties

RL: POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); USES (Uses)  
 (perfluoro; curable fluoropolymer compns. and antireflection **films** made from them)

IT Crosslinking

(photochem.; curable fluoropolymer compns. and antireflection **films** made from them)

IT Fluoropolymers, properties

RL: POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); USES (Uses)  
 (polyether-, perfluoro; curable fluoropolymer compns. and



- antireflection **films** made from them)
- IT 25038-59-9, PET polyester, properties  
 RL: PRP (Properties); TEM (Technical or engineered material use); USES (Uses)  
 (antireflection base **film**; curable fluoropolymer compns. and antireflection **films** made from them)
- IT 402831-45-2 402831-47-4  
 RL: MOA (Modifier or additive use); USES (Uses)  
 (crosslinker; curable fluoropolymer compns. and antireflection **films** made from them)
- IT 174082-93-0P, Perfluoro(1,1,9,9-tetrahydro-2,5-bistrifluoromethyl-3,6-dioxanonenol)-vinylidene fluoride **copolymer**  
 402831-48-5P 402831-52-1P 402913-60-4P,  
 Perfluoro(1,1,9,9-tetrahydro-2,5-bistrifluoromethyl-3,6-dioxanonenol) homopolymer  $\alpha$ -fluoroacrylate ester 402913-61-5P,  
 Perfluoro(1,1,9,9-tetrahydro-2,5-bistrifluoromethyl-3,6-dioxanonenol)-vinylidene fluoride **copolymer**  $\alpha$ -fluoroacrylate ester  
 402913-64-8P, Perfluoro(1,1,9,9-tetrahydro-2,5-bistrifluoromethyl-3,6-dioxanonenol)-perfluoro(1,1,9,9-tetrahydro-2,5-bistrifluoromethyl-3,6-dioxanenoic acid methyl ester) **copolymer**  $\alpha$ -fluoroacrylate ester 402913-65-9P, Perfluoro(1,1,9,9-tetrahydro-2,5-bistrifluoromethyl-3,6-dioxanonenol)-tetrafluoroethylene **copolymer**  $\alpha$ -fluoroacrylate ester 402913-67-1P,  
 Chlorotrifluoroethylene-perfluoro(1,1,9,9-tetrahydro-2,5-bistrifluoromethyl-3,6-dioxanonenol) **copolymer**  $\alpha$ -fluoroacrylate ester 402913-68-2P, 2,3,3,5,6,6,8-Heptafluoro-4,7,10-trioxa-5,8-bis(trifluoromethyl)-12,13-dihydroxytridec-1-ene polymer  $\alpha$ -fluoroacrylate ester  
 RL: IMF (Industrial manufacture); POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
 (curable fluoropolymer compns. and antireflection **films** made from them)
- IT 292163-49-6P  
 RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)  
 (curable fluoropolymer compns. and antireflection **films** made from them)
- IT 402831-50-9P 402831-51-0P  
 RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)  
 (monomer; curable fluoropolymer compns. and antireflection **films** made from them)
- IT 119-61-9, Benzophenone, uses 7473-98-5, 2-Hydroxy-2-methylpropiophenone 24650-42-8, 2,2-Dimethoxy-2-phenylacetophenone  
 RL: CAT (Catalyst use); USES (Uses)  
 (photoinitiator; curable fluoropolymer compns. and antireflection **films** made from them)
- IT 402831-46-3P  
 RL: CAT (Catalyst use); IMF (Industrial manufacture); PREP (Preparation); USES (Uses)  
 (photoinitiator; curable fluoropolymer compns. and antireflection **films** made from them)
- IT 60556-85-6,  $\alpha$ -Fluoroacryloyl fluoride 174082-85-0, Perfluoro(1,1,9,9-tetrahydro-2,5-bistrifluoromethyl-3,6-dioxanonenol) 174082-91-8, 2,3,3,5,6,6,8-Heptafluoro-4,7,10-trioxa-5,8-bis(trifluoromethyl)-12,13-epoxytridec-1-ene  
 RL: RCT (Reactant); RACT (Reactant or reagent)

(reactant for monomer; curable fluoropolymer compns. and antireflection  
films made from them)

IT 402831-49-6P

RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation); RACT  
(Reactant or reagent)

(reactant; curable fluoropolymer compns. and antireflection  
films made from them)

RE.CNT 10 THERE ARE 10 CITED REFERENCES AVAILABLE FOR THIS RECORD

RE

- (1) Dainippon Ink And Chemicals Inc; JP 02233748 A 1990 HCAPLUS
- (2) E I Du Pont de Nemours And Company; EP 150617 A 1984 HCAPLUS
- (3) E I Du Pont de Nemours And Company; US 4474899 A 1984 HCAPLUS
- (4) E I Du Pont de Nemours And Company; JP 60168711 A 1984 HCAPLUS
- (5) Kaneka Corporation; EP 1059308 A 2000 HCAPLUS
- (6) Kaneka Corporation; JP 12072815 A 2000
- (7) Kaneka Corporation; JP 12072816 A 2000
- (8) Kaneka Corporation; JP 12095826 A 2000
- (9) Kaneka Corporation; JP 12136211 A 2000
- (10) Kaneka Corporation; WO 9943719 A 2000 HCAPLUS

IT 174082-93-0P, Perfluoro(1,1,9,9-tetrahydro-2,5-bistrifluoromethyl-  
3,6-dioxanonenol)-vinylidene fluoride **copolymer**  
402831-48-5P 402831-52-1P 402913-60-4P,  
Perfluoro(1,1,9,9-tetrahydro-2,5-bistrifluoromethyl-3,6-dioxanonenol)  
homopolymer  $\alpha$ -fluoroacrylate ester 402913-61-5P,  
Perfluoro(1,1,9,9-tetrahydro-2,5-bistrifluoromethyl-3,6-dioxanonenol)-  
vinylidene fluoride **copolymer**  $\alpha$ -fluoroacrylate ester  
402913-64-8P, Perfluoro(1,1,9,9-tetrahydro-2,5-bistrifluoromethyl-  
3,6-dioxanonenol)-perfluoro(1,1,9,9-tetrahydro-2,5-bistrifluoromethyl-3,6-  
dioxanenoic acid methyl ester) **copolymer**  $\alpha$ -  
fluoroacrylate ester 402913-65-9P, Perfluoro(1,1,9,9-tetrahydro-  
2,5-bistrifluoromethyl-3,6-dioxanonenol)-tetrafluoroethylene  
**copolymer**  $\alpha$ -fluoroacrylate ester 402913-67-1P,  
Chlorotrifluoroethylene-perfluoro(1,1,9,9-tetrahydro-2,5-  
bistrifluoromethyl-3,6-dioxanonenol) **copolymer**  
 $\alpha$ -fluoroacrylate ester 402913-68-2P, 2,3,3,5,6,6,8-  
Heptafluoro-4,7,10-trioxa-5,8-bis(trifluoromethyl)-12,13-dihydroxytridec-1-  
ene polymer  $\alpha$ -fluoroacrylate ester

RL: IMF (Industrial manufacture); POF (Polymer in formulation);  
PRP (Properties); TEM (Technical or engineered material use); PREP  
(Preparation); USES (Uses)

(curable fluoropolymer compns. and antireflection films made  
from them)

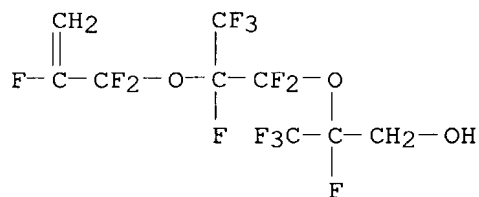
RN 174082-93-0 HCAPLUS

CN 1-Propanol, 2,3,3,3-tetrafluoro-2-[(1,1,2,3,3,3-hexafluoro-2-[(1,1,2-  
trifluoro-2-propenyl)oxy]propoxy]-, polymer with 1,1-difluoroethene (9CI)  
(CA INDEX NAME)

CM 1

CRN 174082-85-0

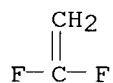
CMF C9 H5 F13 O3



CM 2

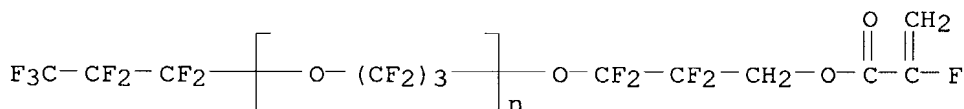
CRN 75-38-7

CMF C2 H2 F2



RN 402831-48-5 HCAPLUS

CN Poly[oxy(1,1,2,2,3,3-hexafluoro-1,3-propanediyl)],  $\alpha$ -(heptafluoropropyl)- $\omega$ -[1,1,2,2-tetrafluoro-3-[(2-fluoro-1-oxo-2-propenyl)oxy]propoxy]- (9CI) (CA INDEX NAME)



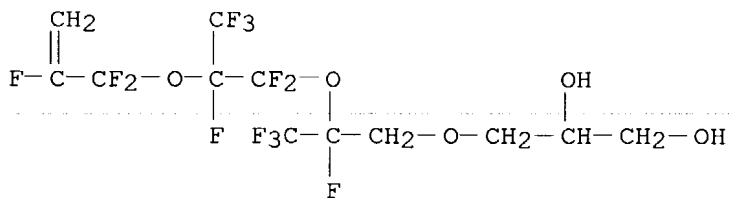
RN 402831-52-1 HCAPLUS

CN 1,2-Propanediol, 3-[2,3,3,3-tetrafluoro-2-[1,1,2,3,3,3-hexafluoro-2-[(1,1,2-trifluoro-2-propenyl)oxy]propoxy]propoxy]-, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 402831-50-9

CMF C12 H11 F13 O5

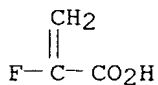


RN 402913-60-4 HCAPLUS

CN 1-Propanol, 2,3,3,3-tetrafluoro-2-[1,1,2,3,3,3-hexafluoro-2-[(1,1,2-trifluoro-2-propenyl)oxy]propoxy]-, homopolymer, 2-fluoro-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 430-99-9  
CMF C3 H3 F O2

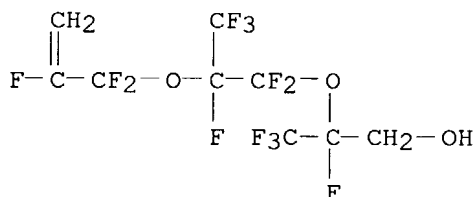


CM 2

CRN 292163-49-6  
CMF (C9 H5 F13 O3)x  
CCI PMS

CM 3

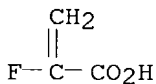
CRN 174082-85-0  
CMF C9 H5 F13 O3



RN 402913-61-5 HCAPLUS  
CN 1-Propanol, 2,3,3,3-tetrafluoro-2-[1,1,2,3,3,3-hexafluoro-2-[(1,1,2-trifluoro-2-propenyl)oxy]propoxy]-, polymer with 1,1-difluoroethene, 2-fluoro-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 430-99-9  
CMF C3 H3 F O2

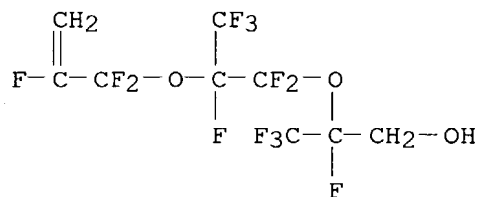


CM 2

CRN 174082-93-0  
CMF (C9 H5 F13 O3 . C2 H2 F2)x  
CCI PMS

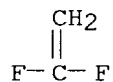
CM 3

CRN 174082-85-0  
CMF C9 H5 F13 O3



CM 4

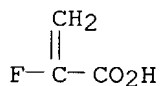
CRN 75-38-7  
CMF C2 H2 F2



RN 402913-64-8 HCAPLUS  
CN Butanoic acid, 3,4,4,4-tetrafluoro-3-[1,1,2,3,3,3-hexafluoro-2-[(1,1,2-trifluoro-2-propenyl)oxy]propoxy]-, methyl ester, polymer with 2,3,3,3-tetrafluoro-2-[1,1,2,3,3,3-hexafluoro-2-[(1,1,2-trifluoro-2-propenyl)oxy]propoxy]-1-propanol, 2-fluoro-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 430-99-9  
CMF C3 H3 F O2

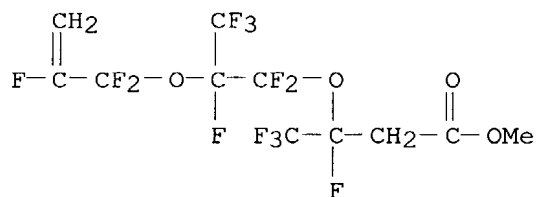


CM 2

CRN 402913-63-7  
CMF (C11 H7 F13 O4 . C9 H5 F13 O3)x  
CCI PMS

CM 3

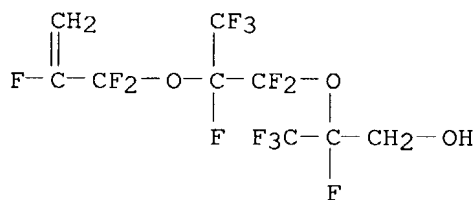
CRN 402913-62-6  
CMF C11 H7 F13 O4



CM 4

CRN 174082-85-0

CMF C9 H5 F13 O3



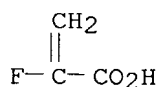
RN 402913-65-9 HCAPLUS

CN 1-Propanol, 2,3,3,3-tetrafluoro-2-[1,1,2,3,3,3-hexafluoro-2-[(1,1,2-trifluoro-2-propenyl)oxy]propoxy]-, polymer with tetrafluoroethene, 2-fluoro-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 430-99-9

CMF C3 H3 F O2



CM 2

CRN 174082-92-9

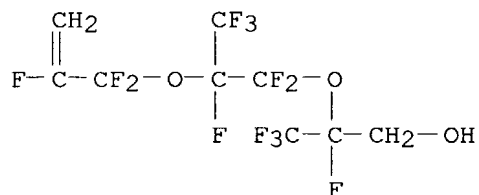
CMF (C9 H5 F13 O3 . C2 F4)x

CCI PMS

CM 3

CRN 174082-85-0

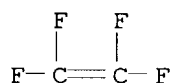
CMF C9 H5 F13 O3



CM 4

CRN 116-14-3

CMF C2 F4



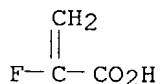
RN 402913-67-1 HCAPLUS

CN 1-Propanol, 2,3,3,3-tetrafluoro-2-[1,1,2,3,3,3-hexafluoro-2-[(1,1,2-trifluoro-2-propenyl)oxy]propoxy]-, polymer with chlorotrifluoroethene, 2-fluoro-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 430-99-9

CMF C3 H3 F O2



CM 2

CRN 402913-66-0

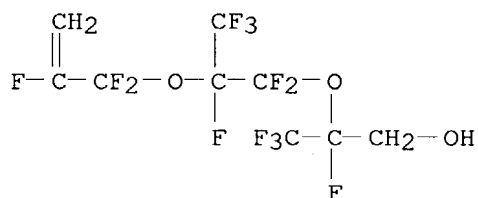
CMF (C9 H5 F13 O3 . C2 Cl F3)x

CCI PMS

CM 3

CRN 174082-85-0

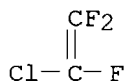
CMF C9 H5 F13 O3



CM 4

CRN 79-38-9

CMF C2 C1 F3



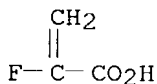
RN 402913-68-2 HCAPLUS

CN 1,2-Propanediol, 3-[2,3,3,3-tetrafluoro-2-[1,1,2,3,3,3-hexafluoro-2-[(1,1,2-trifluoro-2-propenyl)oxy]propoxy]propoxy]-, homopolymer, 2-fluoro-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 430-99-9

CMF C3 H3 F O2



CM 2

CRN 402831-52-1

CMF (C12 H11 F13 O5) x

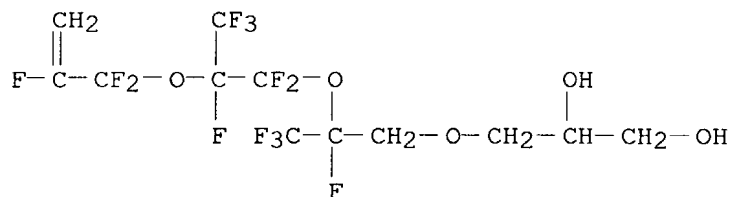
CCI PMS

CM 3

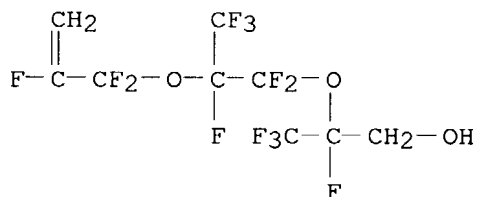
CRN 402831-50-9

CMF C12 H11 F13 O5





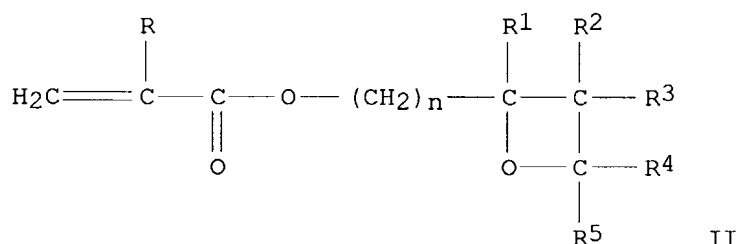
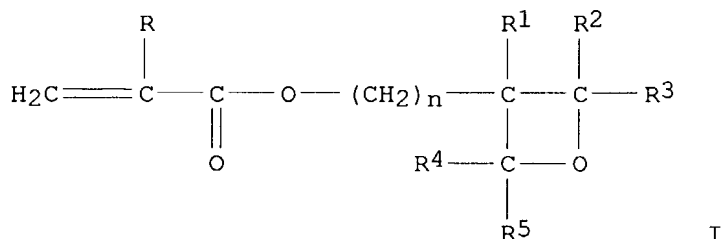
IT 292163-49-6P  
 RL: IMF (Industrial manufacture); RCT (Reactant); PREP  
 (Preparation); RACT (Reactant or reagent)  
 (curable fluoropolymer compns. and antireflection films made  
 from them)  
 RN 292163-49-6 HCAPLUS  
 CN 1-Propanol, 2,3,3,3-tetrafluoro-2-[1,1,2,3,3,3-hexafluoro-2-[(1,1,2-  
 trifluoro-2-propenyl)oxy]propoxy]-, homopolymer (9CI) (CA INDEX NAME)  
 CM 1  
 CRN 174082-85-0  
 CMF C9 H5 F13 O3



L36 ANSWER 7 OF 22 HCAPLUS COPYRIGHT 2003 ACS on STN  
 AN 2001:791921 HCAPLUS  
 DN 135:336900  
 ED Entered STN: 31 Oct 2001  
 TI Radiation-sensitive oxetane-containing acrylic polymer  
 compositions  
 IN Nishimura, Isao; Ogasawara, Shoji; Endo, Masayuki  
 PA Jsr Ltd., Japan  
 SO Jpn. Kokai Tokkyo Koho, 16 pp.  
 CODEN: JKXXAF  
 DT Patent  
 LA Japanese  
 IC ICM C08F002-44  
 ICS C08F002-46; C08F020-10; C08F265-06; C08F267-02; C08F267-04;  
 C08K005-10; C08L033-16; C08L035-00  
 CC 74-4 (Radiation Chemistry, Photochemistry, and Photographic and Other  
 Reprographic Processes)  
 Section cross-reference(s): 38  
 FAN.CNT 1  

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2001302712	A2	20011031	JP 2000-118177	20000419
PRAI JP 2000-118177		20000419		

GI



AB The compns., useful for interlayer insulating **films** and spacers for liquid crystal displays, etc., contain (A) **copolymers** manufactured from (A1) unsatd. carboxylic acids and/or their anhydrides, (A2) I or II (R, R<sup>1</sup> = H, C1-4 alkyl; R<sup>2</sup>-R<sup>5</sup> = H, F, C1-4 alkyl, Ph, C1-4 perfluoroalkyl; n = 1-6), (A3) unsatd. olefins other than A and B, (B) ethylenically unsatd. compds., and (C) radiation-sensitive polymerization initiators. Thus,

a

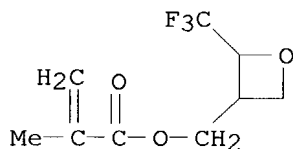
**composition** containing styrene-methacrylic acid-dicyclopentanyl methacrylate-3-(methacryloyloxymethyl)-3-ethyloxetane **copolymer**, Kayarad DPHA, and Irgacure 907 [2-methyl-1-[4-(methylthio)phenyl]-2-morpholino-propan-1-one] was applied on a glass plate, heated at 100°, and subjected to photolithog. process giving high-resolution pattern showing good heat resistance and transparency.

- ST oxetane acrylic polymer **radiation curable** heat resistance; photolithog resolu oxetane acrylic polymer transparency; photoimaging oxetane acrylic polymer **radiation curable**
- IT Photoimaging materials  
(photopolymerizable; radiation-sensitive oxetane-containing acrylic polymer compns.)
- IT Discoloration prevention  
(radiation-sensitive oxetane-containing acrylic polymer compns.)
- IT Heat-resistant materials  
Transparent materials  
(radiation-sensitive oxetane-containing acrylic polymer compns. for)
- IT 370567-64-9P, Dicyclopentanyl methacrylate-methacrylic acid-3-(methacryloyloxymethyl)-3-ethyloxetane-styrene **copolymer**  
**370567-66-1P** 370567-68-3P 370567-70-7P  
RL: **IMF (Industrial manufacture)**; TEM (Technical or engineered material use); **PREP (Preparation)**; USES (Uses)  
(radiation-sensitive oxetane-containing acrylic polymer compns.)

IT 77641-99-7, Kayarad DPHA  
 RL: TEM (Technical or engineered material use); USES (Uses)  
 (radiation-sensitive oxetane-containing acrylic polymer comps.)  
 IT 370567-66-1P  
 RL: IMF (Industrial manufacture); TEM (Technical or engineered  
 material use); PREP (Preparation); USES (Uses)  
 (radiation-sensitive oxetane-containing acrylic polymer comps.)  
 RN 370567-66-1 HCAPLUS  
 CN 2-Propenoic acid, 2-methyl-, polymer with ethenylbenzene,  
 octahydro-4,7-methano-1H-inden-5-yl 2-methyl-2-propenoate and  
 [2-(trifluoromethyl)-3-oxetanyl]methyl 2-methyl-2-propenoate (9CI) (CA  
 INDEX NAME)

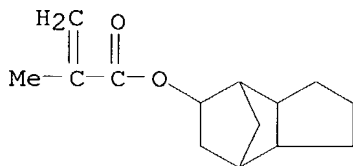
CM 1

CRN 370567-65-0  
 CMF C9 H11 F3 O3



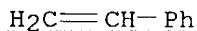
CM 2

CRN 34759-34-7  
 CMF C14 H20 O2



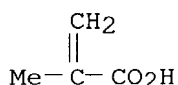
CM 3

CRN 100-42-5  
 CMF C8 H8



CM 4

CRN 79-41-4  
 CMF C4 H6 O2



L36 ANSWER 8 OF 22 HCAPLUS COPYRIGHT 2003 ACS on STN  
 AN 2001:627116 HCAPLUS  
 DN 135:196988  
 ED Entered STN: 29 Aug 2001  
 TI Photocurable fluororesin-containing curable sealing materials with soil resistance  
 IN Yokota, Mikio; Tanaka, Hideaki; Onoguchi, Tatsuo; Akagi, Etsuko; Hayashi, Tomomi  
 PA Asahi Glass Co., Ltd., Japan  
 SO Jpn. Kokai Tokkyo Koho, 12 pp.  
 CODEN: JKXXAF  
 DT Patent  
 LA Japanese  
 IC ICM C09K003-10  
 ICS C09K003-10; C08F214-18  
 CC 42-11 (Coatings, Inks, and Related Products)  
 Section cross-reference(s): 39  
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2001234157	A2	20010828	JP 2000-52131	20000223
PRAI	JP 2000-52131		20000223		

AB Title materials comprise (a) fluororesins containing **photocurable functional groups** and **polyfluoroalkyl** groups and (b) polysilicones, (modified) polysulfides, acrylic polyurethanes, soft fluoropolymers, and/or reactive Si group-containing saturated hydrocarbon polymers. A Sealant 70 (silicone sealant) was mixed with 2.5% a polymer from perfluoroalkylethyl acrylate, 2-hydroxyethyl acrylate, 3-methacryloxyethyl isocyanate, and polyoxypropylene Bu ether acrylate to form a sealant with elongation 900%, good mech. strength and soil resistance after 6 mo at outdoor.

ST silicone sealant contg photocurable fluororesin soil resistance; polysulfide sealant contg photocurable fluororesin soil resistance; acrylic polyurethane sealant contg photocurable fluororesin soil resistance

IT Silicone rubber, uses  
 RL: POF (Polymer in formulation); TEM (Technical or engineered material use); USES (Uses)  
 (Sealant 70; photocurable fluororesin-containing polymer-based sealants with soil resistance)

IT Polysulfide rubber  
 RL: POF (Polymer in formulation); TEM (Technical or engineered material use); USES (Uses)  
 (Threekol C 320; photocurable fluororesin-containing polymer-based sealants with soil resistance)

IT Urethane rubber, uses  
 RL: POF (Polymer in formulation); TEM (Technical or engineered material use); USES (Uses)  
 (acrylic, Bond AU seal; photocurable fluororesin-containing polymer-based sealants with soil resistance)

IT Sealing compositions  
 (photocurable fluororesin-containing polymer-based sealants with soil

- resistance)
- IT Fluoropolymers, uses  
 RL: IMF (Industrial manufacture); MOA (Modifier or additive use); PREP (Preparation); USES (Uses)  
 (photocurable fluororesin-containing polymer-based sealants with soil resistance)
- IT Acrylic rubber  
 RL: POF (Polymer in formulation); TEM (Technical or engineered material use); USES (Uses)  
 (urethane, Bond AU seal; photocurable fluororesin-containing polymer-based sealants with soil resistance)
- IT 131462-83-4, Hamatight SC 500  
 RL: POF (Polymer in formulation); TEM (Technical or engineered material use); USES (Uses)  
 (Hamatight SC 500; photocurable fluororesin-containing polymer-based sealants with soil resistance)
- IT 79-10-7DP, Acrylic acid, perfluoroalkylethyl derivs., polymers with **functional** (meth)acrylates 141-32-2DP, Butyl acrylate, polymers with perfluoroalkylethyl acrylates and **functional** (meth)acrylates 818-61-1DP, 2-Hydroxyethyl acrylate, polymers with perfluoroalkylethyl acrylates and **functional** (meth)acrylates 1866-31-5DP, Allyl Cinnamate, polymers with perfluoroalkylethyl acrylates and **functional** (meth)acrylates 4813-57-4DP, Stearyl acrylate, polymers with perfluoroalkylethyl acrylates and **functional** (meth)acrylates 30674-80-7DP, 2-Methacryloxyethyl isocyanate, polymers with perfluoroalkylethyl acrylates and **functional** (meth)acrylates 51247-77-9DP, Poly(propylene glycol) monobutyl ether acrylate, polymers with perfluoroalkylethyl acrylates and **functional** (meth)acrylates  
 RL: IMF (Industrial manufacture); MOA (Modifier or additive use); PREP (Preparation); USES (Uses)  
 (photocurable fluororesin-containing polymer-based sealants with soil resistance)
- IT 339195-09-4, Mylex Z 350248-75-8, cemedine S 150  
 RL: POF (Polymer in formulation); TEM (Technical or engineered material use); USES (Uses)  
 (photocurable fluororesin-containing polymer-based sealants with soil resistance)

L36 ANSWER 9 OF 22 HCAPLUS COPYRIGHT 2003 ACS on STN

AN 2001:235639 HCAPLUS

DN 134:267337

ED Entered STN: 04 Apr 2001

TI **Radiation-curable** resin **compositions** and their antireflective cured products

IN Nishikawa, Akira; Irie, Tomoko; Ukachi, Takashi

PA JSR Co., Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 15 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

IC ICM C08L027-12

ICS C07C317-12; C07C317-14; C07C317-20; C07C317-22; C07C317-24;  
 C08G059-34; C08G059-68; C08J003-24; C08K005-3477; C08K005-41;  
 C08K005-42

CC 38-3 (Plastics Fabrication and Uses)

Section cross-reference(s): 73

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2001089623	A2	20010403	JP 1999-271841	19990927
PRAI	JP 1999-271841		19990927		
OS	MARPAT 134:267337				
AB	The compns. comprise (A) fluoropolymers containing OH and/or epoxy groups, (B) compds. containing $\geq 2$ alkoxyalkylamino or hydroxyalkylamino groups in a mol., and (C) acid generators of disulfonylmethanes and/or tri(alkoxyphenyl)sulfonium sulfonates. Thus, perfluoro(Pr vinyl ether)-Et vinyl ether-hydroxyethyl vinyl ether-hexafluoropropylene <b>copolymer</b> was mixed with alkoxyethylated melamine (MX 303) and 1,1-bis(phenylsulfonyl)cyclohexane, applied on an acrylic resin plate, UV-cured, and post-cured at 80° for 15 min to give a laminate showing reflection 1.8%, and good scratch and solvent resistance.				
ST	fluoropolymer phenylsulfonylcyclohexane <b>radiation cure</b> antireflection <b>film</b> ; alkoxyphenylsulfonium sulfonate catalyst UV cure fluoropolymer; scratch resistance melamine fluoropolymer laminate				
IT	Fluoropolymers, uses RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses) (aminoplast-; <b>radiation-curable</b> resin compns. for antireflective laminated <b>films</b> )				
IT	Polysiloxanes, uses RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses) (aminoplast-epoxy-polyoxyalkylene-, fluorine-containing; <b>radiation-curable</b> resin compns. for antireflective laminated <b>films</b> )				
IT	Fluoropolymers, uses RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses) (aminoplast-epoxy-polyoxyalkylene-polysiloxane-; <b>radiation-curable</b> resin compns. for antireflective laminated <b>films</b> )				
IT	Polyoxyalkylenes, uses RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses) (aminoplast-epoxy-polysiloxane-, fluorine-containing; <b>radiation-curable</b> resin compns. for antireflective laminated <b>films</b> )				
IT	Polysiloxanes, uses RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses) (aminoplast-polyoxyalkylene-, fluorine-containing; <b>radiation-curable</b> resin compns. for antireflective laminated <b>films</b> )				
IT	Epoxy resins, uses Polyoxyalkylenes, uses RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses) (aminoplast-polyoxyalkylene-polysiloxane-, fluorine-containing; <b>radiation-curable</b> resin compns. for antireflective laminated <b>films</b> )				
IT	Fluoropolymers, uses RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses) (aminoplast-polyoxyalkylene-polysiloxane-; <b>radiation-curable</b> resin compns. for antireflective laminated <b>films</b> )				

- films)**
- IT Aminoplasts  
 RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
 (epoxy, fluorine-containing; **radiation-curable** resin compns. for antireflective laminated **films**)
- IT Aminoplasts  
 RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
 (epoxy-polyoxyalkylene-polysiloxane-, fluorine-containing; **radiation-curable** resin compns. for antireflective laminated **films**)
- IT Aminoplasts  
 RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
 (fluorine-containing; **radiation-curable** resin compns. for antireflective laminated **films**)
- IT Antireflective **films**  
 (multilayer; **radiation-curable** resin compns. for antireflective laminated **films**)
- IT Crosslinking catalysts  
 (photochem.; **radiation-curable** resin compns. for antireflective laminated **films**)
- IT Aminoplasts  
 RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
 (polyoxyalkylene-polysiloxane-, fluorine-containing; **radiation-curable** resin compns. for antireflective laminated **films**)
- IT 66003-78-9, Triphenylsulfonium trifluoromethanesulfonate 88073-51-2, Benzene, 1,1'-[cyclopentylidenebis(sulfonyl)]bis- 90555-42-3 103979-48-2, Benzene, 1,1'-[cyclohexylidenebis(sulfonyl)]bis- 149125-91-7, Tris(p-methoxyphenyl)sulfonium triflate  
 RL: CAT (Catalyst use); USES (Uses)  
 (curing catalyst; **radiation-curable** resin compns. for antireflective laminated **films**)
- IT 248949-64-6P 331814-19-8P 331814-20-1P 331841-71-5P  
 RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
 (**radiation-curable** resin compns. for antireflective laminated **films**)
- IT 248949-64-6P 331814-19-8P 331814-20-1P 331841-71-5P  
 RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
 (**radiation-curable** resin compns. for antireflective laminated **films**)
- 
- RN 248949-64-6 HCAPLUS
- CN Pentanoic acid, 4,4'-azobis[4-cyano-, polymer with  $\alpha$ -[(3-aminopropyl)dimethylsilyl]- $\omega$ -[[[(3-aminopropyl)dimethylsilyl]oxy]poly[oxy(dimethylsilylene)], [(ethenyloxy)methyl]oxirane, ethoxyethene, formaldehyde, 1,1,1,2,2,3,3-heptafluoro-3-[(trifluoroethenyl)oxy]propane, 1,1,2,3,3,3-hexafluoro-1-propene,  $\alpha$ -[1-[(nonylphenoxy)methyl]-2-(2-propenyloxy)ethyl]- $\omega$ -hydroxypoly(oxy-1,2-ethanediyl) and 1,3,5-triazine-2,4,6-triamine (9CI) (CA INDEX NAME)

CM 1

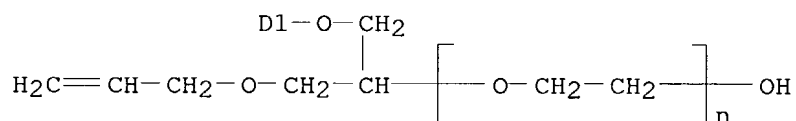
CRN 111144-60-6

CMF (C2 H4 O)<sub>n</sub> C21 H34 O3

CCI IDS, PMS



D1- (CH<sub>2</sub>)<sub>8</sub>-Me

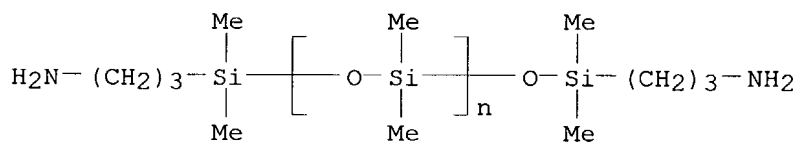


CM 2

CRN 97917-34-5

CMF (C2 H6 O Si)<sub>n</sub> C10 H28 N2 O Si2

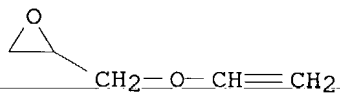
CCI PMS



CM 3

CRN 3678-15-7

CMF C5 H8 O2

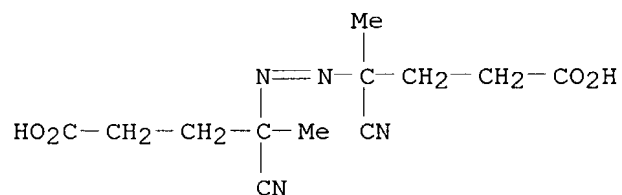


CM 4

CRN 2638-94-0

CMF C12 H16 N4 O4

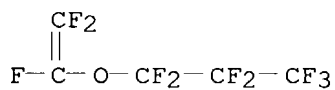




CM 5

CRN 1623-05-8

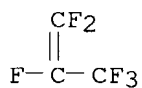
CMF C5 F10 O



CM 6

CRN 116-15-4

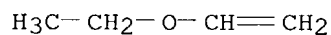
CMF C3 F6



CM 7

CRN 109-92-2

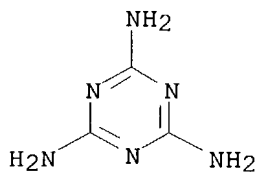
CMF C4 H8 O



CM 8

CRN 108-78-1

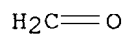
CMF C3 H6 N6



CM 9

CRN 50-00-0

CMF C H2 O



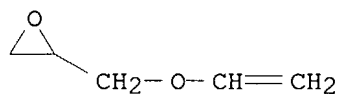
RN 331814-19-8 HCAPLUS

CN Formaldehyde, polymer with [(ethenyloxy)methyl]oxirane, ethoxyethene, 1,1,1,2,2,3,3-heptafluoro-3-[(trifluoroethenyl)oxy]propane, 1,1,2,3,3,3-hexafluoro-1-propene and 1,3,5-triazine-2,4,6-triamine (9CI) (CA INDEX NAME)

CM 1

CRN 3678-15-7

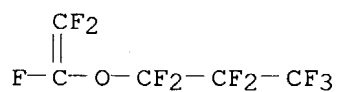
CMF C5 H8 O2



CM 2

CRN 1623-05-8

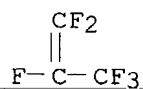
CMF C5 F10 O



CM 3

CRN 116-15-4

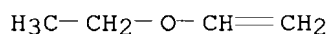
CMF C3 F6



CM 4

CRN 109-92-2

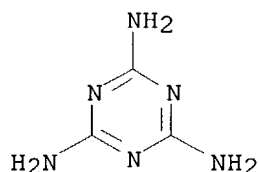
CMF C4 H8 O



CM 5

CRN 108-78-1

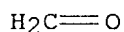
CMF C3 H6 N6



CM 6

CRN 50-00-0

CMF C H2 O



RN 331814-20-1 HCAPLUS

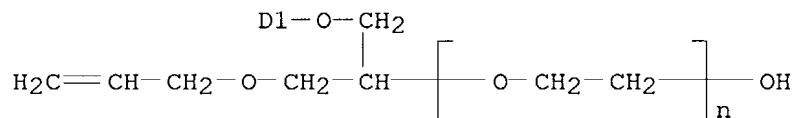
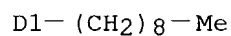
CN Pentanoic acid, 4,4'-azobis[4-cyano-, polymer with  $\alpha$ -[(3-aminopropyl)dimethylsilyl]- $\omega$ -[[[(3-aminopropyl)dimethylsilyl]oxy]poly[oxy(dimethylsilylene)], 2-(ethenyloxy)ethanol, ethoxyethene, formaldehyde, 1,1,1,2,2,3,3-heptafluoro-3-[(trifluoroethenyl)oxy]propane, 1,1,2,3,3,3-hexafluoro-1-propene,  $\alpha$ -[1-[(nonylphenoxy)methyl]-2-(2-propenyloxy)ethyl]- $\omega$ -hydroxypoly(oxy-1,2-ethanediyl) and 1,3,5-triazine-2,4,6-triamine (9CI) (CA INDEX NAME)

CM 1

CRN 111144-60-6

CMF (C2 H4 O)<sub>n</sub> C21 H34 O3

CCI IDS, PMS

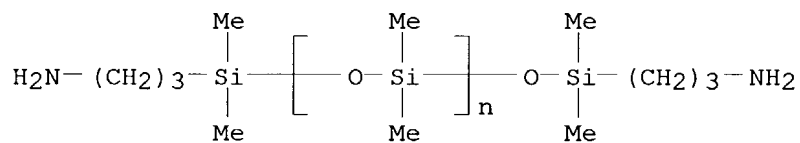


CM 2

CRN 97917-34-5

CMF (C2 H6 O Si)<sub>n</sub> C10 H28 N2 O Si2

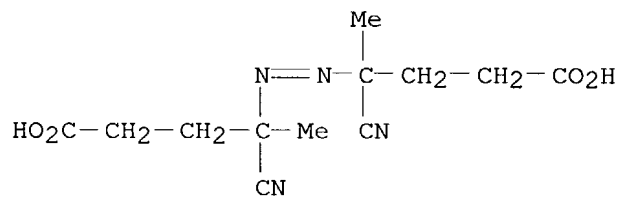
CCI PMS



CM 3

CRN 2638-94-0

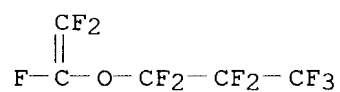
CMF C12 H16 N4 O4



CM 4

CRN 1623-05-8

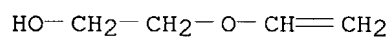
CMF C5 F10 O



CM 5

CRN 764-48-7

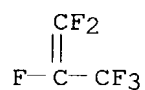
CMF C4 H8 O2



CM 6

CRN 116-15-4

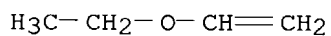
CMF C3 F6



CM 7

CRN 109-92-2

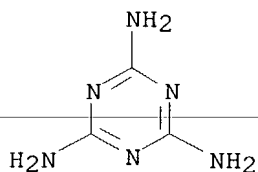
CMF C4 H8 O



CM 8

CRN 108-78-1

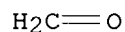
CMF C3 H6 N6



CM 9

CRN 50-00-0

CMF C H2 O

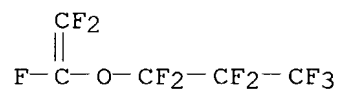


RN 331841-71-5 HCAPLUS  
 CN Formaldehyde, polymer with 2-(ethenyloxy)ethanol, ethoxyethene,  
 1,1,1,2,2,3,3-heptafluoro-3-[(trifluoroethenyl)oxy]propane,  
 1,1,2,3,3,3-hexafluoro-1-propene and 1,3,5-triazine-2,4,6-triamine (9CI)  
 (CA INDEX NAME)

CM 1

CRN 1623-05-8

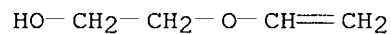
CMF C5 F10 O



CM 2

CRN 764-48-7

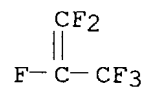
CMF C4 H8 O2



CM 3

CRN 116-15-4

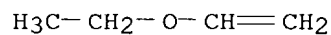
CMF C3 F6



CM 4

CRN 109-92-2

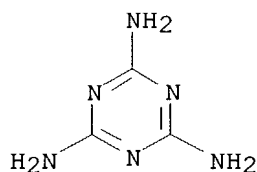
CMF C4 H8 O



CM 5

CRN 108-78-1

CMF C3 H6 N6



CM 6

CRN 50-00-0  
CMF C H2 O

H<sub>2</sub>C=O

L36 ANSWER 10 OF 22 HCAPLUS COPYRIGHT 2003 ACS on STN

AN 2001:110001 HCAPLUS

DN 134:164583

ED Entered STN: 14 Feb 2001

TI **Radiation-curable coating compositions** for  
antireflective **films** in LCD devices

IN Yasuda, Tomokazu

PA Fuji Photo Film Co., Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 16 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

IC ICM C09D183-04

ICS C09D005-00; G02B001-11; G02F001-1335

CC 42-10 (Coatings, Inks, and Related Products)

Section cross-reference(s): 74, 76

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2001040284	A2	20010213	JP 1999-212394	19990727
PRAI	JP 1999-212394		19990727		

AB The title **films** are prepared by coating on a support **film** such as a triacetate cellulose **film** with multilayers in the order of: (1) a gelation primer layer, (2) an acrylic hard coat, (3) a medium refractive index layer, (4) a high refractive index layer, and (5) a low refractive index layer (A) and hardening the **film** at 100° and exposing to actinic radiation such as electron beam, microwave and UV light, wherein the A is obtained from the hydrolytic condensation products of organosilane compds. with organosilyl group-containing polymers as a sol solution

ST triacetate cellulose support **film** antireflective **film** LCD device; acrylic hard coat coating antireflective **film** manuf; low refractive index layer antireflective **film** manuf; microwave hardening alkoxysilyl compd low refractive index layer; organosilane condensate **radiation curable** coating low refractive index layer; multilayer coating antireflective **film** manuf

- IT Fluoropolymers, uses  
 RL: DEV (Device component use); IMF (Industrial manufacture); POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
 ((perfluoroalkoxy)propyl siloxane-, low refractive index layer; **radiation-curable** coating compns. for antireflective films in LCD devices)
- IT Polysiloxanes, uses  
 RL: DEV (Device component use); IMF (Industrial manufacture); POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
 ((perfluoroalkoxy)propyl, low refractive index layer; **radiation-curable** coating compns. for antireflective films in LCD devices)
- IT Polysiloxanes, uses  
 RL: DEV (Device component use); IMF (Industrial manufacture); POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
 (acrylic, fluorine-containing, low refractive index layer; **radiation-curable** coating compns. for antireflective films in LCD devices)
- IT Fluoropolymers, uses  
 RL: DEV (Device component use); IMF (Industrial manufacture); POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
 (acrylic-polysiloxane-, low refractive index layer; **radiation-curable** coating compns. for antireflective films in LCD devices)
- IT Coating materials  
 (multilayer; **radiation-curable** coating compns. for antireflective films in LCD devices)
- IT Antireflective films  
 Hybrid organic-inorganic materials  
 Liquid crystal displays  
 (**radiation-curable** coating compns. for antireflective films in LCD devices)
- IT Crosslinking  
 (**radiochem.**; **radiation-curable** coating compns. for antireflective films in LCD devices)
- IT 13463-67-7, Titanium dioxide, uses  
 RL: MOA (Modifier or additive use); USES (Uses)  
 (filler; **radiation-curable** coating compns. for antireflective films in LCD devices)
- IT 254887-33-7, DPHA-UV 6300B **copolymer**  
 RL: POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); USES (Uses)  
 (hard coat; **radiation-curable** coating compns. for antireflective films in LCD devices)
- IT 82277-45-0, Dipentaerythritol hexaacrylate-dipentaerythritol pentaacrylate **copolymer**  
 RL: POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); USES (Uses)  
 (high refractive index layer; **radiation-curable** coating compns. for antireflective films in LCD devices)
- IT **258277-15-5P**, 1,1,1,3,3,3-Hexafluoroisopropyl methacrylate- $\gamma$ -methacryloxypropyltrimethoxysilane **copolymer**  
**325699-08-9P 325699-09-0P 325699-10-3P 325699-11-4P**



RL: DEV (Device component use); **IMF (Industrial manufacture)**;  
POF (Polymer in formulation); PRP (Properties); TEM (Technical or  
engineered material use); **PREP (Preparation)**; USES (Uses)  
(low refractive index layer; **radiation-curable**  
coating compns. for antireflective **films** in LCD devices)

IT 215879-20-2, Tetraethoxysilane-3,3,3-trifluoropropyltrimethoxysilane  
**copolymer** 325699-03-4, Tetraethoxysilane-1H,1H,2H,2H-  
tetrahydroperfluorooctyltrimethoxysilane-3,3,3-  
trifluoropropyltrimethoxysilane **copolymer** 325699-06-7  
325699-07-8

RL: DEV (Device component use); POF (Polymer in formulation); PRP  
(Properties); TEM (Technical or engineered material use); USES (Uses)  
(low refractive index layer; **radiation-curable**  
coating compns. for antireflective **films** in LCD devices)

IT 325792-30-1, Dipentaerythritol hexaacrylate-dipentaerythritol  
pentaacrylate-DMAEA-Kayamer PM 21 **copolymer**

RL: POF (Polymer in formulation); PRP (Properties); TEM (Technical or  
engineered material use); USES (Uses)  
(medium refractive index layer; **radiation-curable**  
coating compns. for antireflective **films** in LCD devices)

IT 71868-10-5, Irgacure 907

RL: CAT (Catalyst use); USES (Uses)  
(photoinitiator; **radiation-curable** coating compns.  
for antireflective **films** in LCD devices)

IT 82799-44-8, Kayacure DETX

RL: CAT (Catalyst use); USES (Uses)  
(photosensitizer; **radiation-curable** coating compns.  
for antireflective **films** in LCD devices)

IT 9012-09-3, Fuji TAC TD80U

RL: DEV (Device component use); USES (Uses)  
(substrate **film**; **radiation-curable**  
coating compns. for antireflective **films** in LCD devices)

IT 258277-15-5P, 1,1,1,3,3,3-Hexafluoroisopropyl methacrylate-γ-  
methacryloxypropyltrimethoxysilane **copolymer**  
325699-08-9P 325699-09-0P 325699-10-3P  
325699-11-4P

RL: DEV (Device component use); **IMF (Industrial manufacture)**;  
POF (Polymer in formulation); PRP (Properties); TEM (Technical or  
engineered material use); **PREP (Preparation)**; USES (Uses)  
(low refractive index layer; **radiation-curable**  
coating compns. for antireflective **films** in LCD devices)

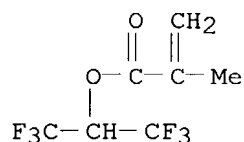
RN 258277-15-5 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, 2,2,2-trifluoro-1-(trifluoromethyl)ethyl  
ester, polymer with 3-(trimethoxysilyl)propyl 2-methyl-2-propenoate (9CI)  
(CA INDEX NAME)

CM 1

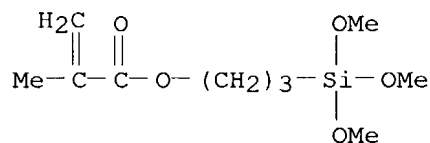
CRN 3063-94-3

CMF C7 H6 F6 O2



CM 2

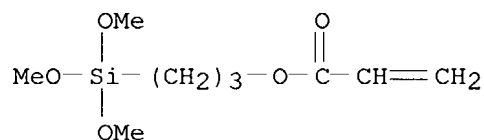
CRN 2530-85-0  
CMF C10 H20 O5 Si



RN 325699-08-9 HCAPLUS  
CN 2-Propenoic acid, 2-methyl-, methyl ester, polymer with methyl 2-propenoate, silicic acid (H<sub>4</sub>SiO<sub>4</sub>) tetraethyl ester, 3-(trimethoxysilyl)propyl 2-propenoate and trimethoxy(3,3,3-trifluoropropyl)silane (9CI) (CA INDEX NAME)

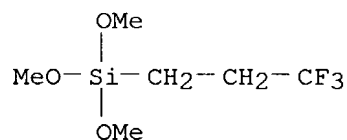
CM 1

CRN 4369-14-6  
CMF C9 H18 O5 Si



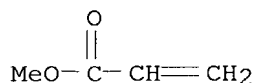
CM 2

CRN 429-60-7  
CMF C6 H13 F3 O3 Si



CM 3

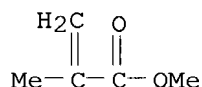
CRN 96-33-3  
CMF C4 H6 O2



CM 4

CRN 80-62-6

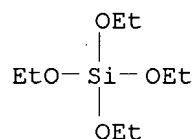
CMF C5 H8 O2



CM 5

CRN 78-10-4

CMF C8 H20 O4 Si



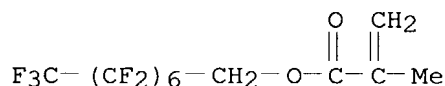
RN 325699-09-0 HCAPLUS

CM 2-Propenoic acid, 2-methyl-, 2,2,3,3,4,4,5,5,6,6,7,7,8,8,8-pentadecafluorooctyl ester, polymer with silicic acid (H4SiO4) tetraethyl ester, 2,2,2-trifluoro-1-(trifluoromethyl)ethyl 2-methyl-2-propenoate, 3-(trimethoxysilyl)propyl 2-methyl-2-propenoate and trimethoxy(3,3,3-trifluoropropyl)silane (9CI) (CA INDEX NAME)

CM 1

CRN 3934-23-4

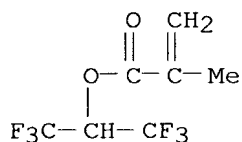
CMF C12 H7 F15 O2



CM 2

CRN 3063-94-3

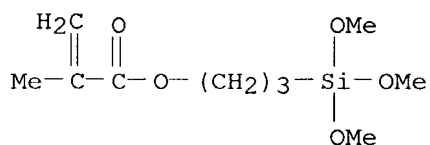
CMF C7 H6 F6 O2



CM 3

CRN 2530-85-0

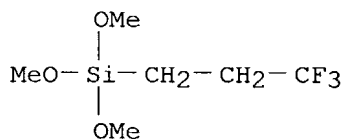
CMF C10 H20 O5 Si



CM 4

CRN 429-60-7

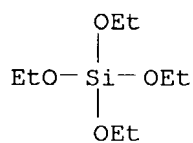
CMF C6 H13 F3 O3 Si



CM 5

CRN 78-10-4

CMF C8 H20 O4 Si

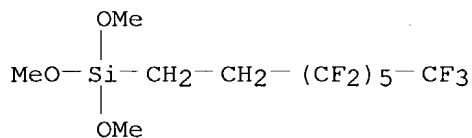


RN 325699-10-3 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, methyl ester, polymer with methyl 2-propenoate, silicic acid (H4SiO4) tetraethyl ester, 3-(trimethoxysilyl)propyl 2-propenoate, trimethoxy(3,3,4,4,5,5,6,6,7,7,8,8,8-tridecafluorooctyl)silane and trimethoxy(3,3,3-trifluoropropyl)silane (9CI) (CA INDEX NAME)

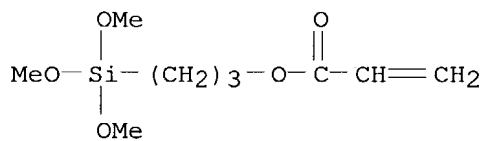
CM 1

CRN 85857-16-5  
CMF C11 H13 F13 O3 Si



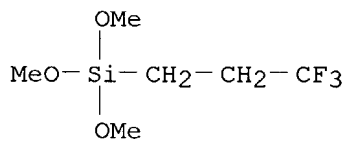
CM 2

CRN 4369-14-6  
CMF C9 H18 O5 Si



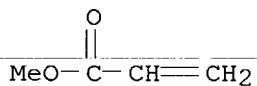
CM 3

CRN 429-60-7  
CMF C6 H13 F3 O3 Si



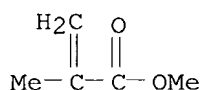
CM 4

CRN 96-33-3  
CMF C4 H6 O2



CM 5

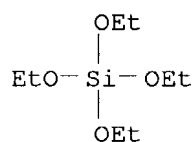
CRN 80-62-6  
CMF C5 H8 O2



CM 6

CRN 78-10-4

CMF C8 H20 O4 Si



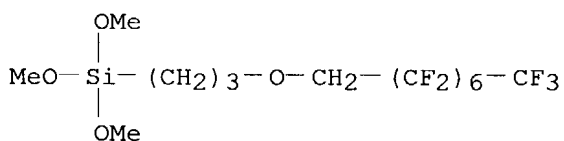
RN 325699-11-4 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, methyl ester, polymer with methyl 2-propenoate, silicic acid (H4SiO4) tetraethyl ester, trimethoxy[3-[(2,2,3,3,4,4,5,5,6,6,7,7,8,8,8-pentadecafluorooctyl)oxy]propyl]silane, 3-(trimethoxysilyl)propyl 2-propenoate, trimethoxy(3,3,4,4,5,5,6,6,7,7,8,8,8-tridecafluorooctyl)silane and trimethoxy(3,3,3-trifluoropropyl)silane (9CI) (CA INDEX NAME)

CM 1

CRN 325699-05-6

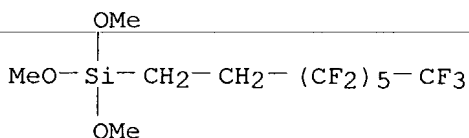
CMF C14 H17 F15 O4 Si



CM 2

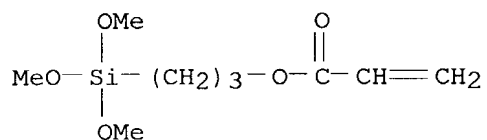
CRN 85857-16-5

CMF C11 H13 F13 O3 Si



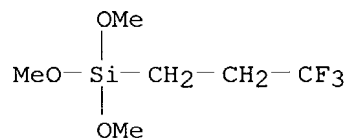
CM 3

CRN 4369-14-6  
CMF C9 H18 O5 Si



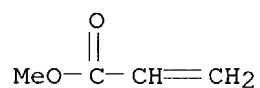
CM 4

CRN 429-60-7  
CMF C6 H13 F3 O3 Si



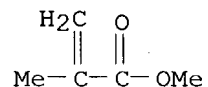
CM 5

CRN 96-33-3  
CMF C4 H6 O2



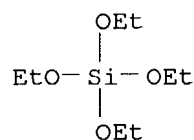
CM 6

CRN 80-62-6  
CMF C5 H8 O2



CM 7

CRN 78-10-4  
CMF C8 H20 O4 Si



L36 ANSWER 11 OF 22 HCAPLUS COPYRIGHT 2003 ACS on STN  
 AN 2000:803816 HCAPLUS  
 DN 133:351246  
 ED Entered STN: 15 Nov 2000  
 TI **Radiation-curable** siloxane group-containing  
 hexafluoropropylene **copolymer compositions** with good  
 adhesion to substrates, and transparent scratch-resistant coatings and  
 antireflection **films** thereof  
 IN Shinohara, Nobuyasu; Sato, Hozumi; Hashiguchi, Hirokazu; Shimomura,  
 Hiroomi  
 PA JSR Co., Ltd., Japan  
 SO Jpn. Kokai Tokkyo Koho, 16 pp.  
 CODEN: JKXXAF  
 DT Patent  
 LA Japanese  
 IC ICM C08F002-46  
 ICS C08L027-12; C09D004-02; C08F020-22  
 CC 38-3 (Plastics Fabrication and Uses)  
 Section cross-reference(s): 42  
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2000313709	A2	20001114	JP 1999-122447	19990428
PRAI	JP 1999-122447		19990428		

AB The compns. contain siloxane group-containing hexafluoropropylene  
**copolymers** and  $\alpha$ -fluoroacrylate monomers. Thus,  
 39.7:9.7:33.8:13.6:1.1:2.1 mol hexafluoropropylene-perfluoro(Pr vinyl  
 ether)-Et vinyl ether-hydroxyethyl vinyl ether-Adeka Reasoap NE 30  
 (reactive nonionic emulsifier)-dimethylsiloxane block **copolymer**  
 (Mn 76,800) 10.0, trifluoroethyl  $\alpha$ -fluoroacrylate 90, and Irgacure  
 184 (initiator) 3.0 g were mixed, applied on a glass plate, and irradiated  
 with a high-pressure Hg lamp to form a transparent **film** with  
 reflective index 1.404.

ST **radiation curable** polyhexafluoropropylene siloxane  
 block antireflection; polytrifluoroethyl fluoroacrylate siloxane blend  
 antireflection **film**; transparency scratch resistance block  
 siloxane coating

IT Coating materials  
 (abrasion-resistant; **radiation-curable** siloxane  
 group-containing hexafluoropropylene **copolymer** compns. for  
 coatings and antireflection **films**)

IT Coating materials  
 (antisoiling; **radiation-curable** siloxane  
 group-containing hexafluoropropylene **copolymer** compns. for  
 coatings and antireflection **films**)

IT Polymerization catalysts  
 (azo group-containing polysiloxanes; **radiation-curable**  
 siloxane group-containing hexafluoropropylene **copolymer** compns.  
 for coatings and antireflection **films**)



- IT Polysiloxanes, uses  
 Polysiloxanes, uses  
 RL: IMF (Industrial manufacture); POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
 (fluorine-containing, block; **radiation-curable** siloxane group-containing hexafluoropropylene **copolymer** compns. for coatings and antireflection **films**)
- IT Emulsifying agents  
 (nonionic, reactive; **radiation-curable** siloxane group-containing hexafluoropropylene **copolymer** compns. for coatings and antireflection **films**)
- IT Polysiloxanes, uses  
 Polysiloxanes, uses  
 RL: CAT (Catalyst use); USES (Uses)  
 (polyamide-, polymerization initiators; **radiation-curable** siloxane group-containing hexafluoropropylene **copolymer** compns. for coatings and antireflection **films**)
- IT Fluoropolymers, uses  
 Fluoropolymers, uses  
 RL: IMF (Industrial manufacture); POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
 (polysiloxane-, block; **radiation-curable** siloxane group-containing hexafluoropropylene **copolymer** compns. for coatings and antireflection **films**)
- IT Polyamides, uses  
 Polyamides, uses  
 RL: CAT (Catalyst use); USES (Uses)  
 (polysiloxane-, polymerization initiators; **radiation-curable** siloxane group-containing hexafluoropropylene **copolymer** compns. for coatings and antireflection **films**)
- IT Antireflective **films**  
 Plastic **films**  
 Transparent **films**  
 (**radiation-curable** siloxane group-containing hexafluoropropylene **copolymer** compns. for coatings and antireflection **films**)
- IT Fluoropolymers, uses  
 RL: IMF (Industrial manufacture); POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
 (**radiation-curable** siloxane group-containing hexafluoropropylene **copolymer** compns. for coatings and antireflection **films**)
- IT Polymer blends  
 RL: PRP (Properties); TEM (Technical or engineered material use); USES (Uses)  
 (**radiation-curable** siloxane group-containing hexafluoropropylene **copolymer** compns. for coatings and antireflection **films**)
- IT Coating materials  
 (**radiation-curable**; **radiation-curable** siloxane group-containing hexafluoropropylene **copolymer** compns. for coatings and antireflection **films**)
- IT Coating materials  
 (scratch-resistant; **radiation-curable** siloxane

group-containing hexafluoropropylene **copolymer** compns. for coatings and antireflection **films**)

IT Coating materials  
(transparent; **radiation-curable** siloxane group-containing hexafluoropropylene **copolymer** compns. for coatings and antireflection **films**)

IT 158947-07-0, VPS 1001  
RL: CAT (Catalyst use); USES (Uses)  
(polymerization initiator; **radiation-curable** siloxane group-containing hexafluoropropylene **copolymer** compns. for coatings and antireflection **films**)

IT **95243-61-1P 96250-38-3P 305819-87-8P**,  
Hexafluoropropylene-perfluoro(Pr vinyl ether)-ethyl vinyl ether-hydroxyethyl vinyl ether-Adeka Reasoap NE 30-dimethylsilanediol block **copolymer**  
RL: **IMF (Industrial manufacture)**; POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); **PREP (Preparation)**; USES (Uses)  
(**radiation-curable** siloxane group-containing hexafluoropropylene **copolymer** compns. for coatings and antireflection **films**)

IT **95243-61-1P 96250-38-3P 305819-87-8P**,  
Hexafluoropropylene-perfluoro(Pr vinyl ether)-ethyl vinyl ether-hydroxyethyl vinyl ether-Adeka Reasoap NE 30-dimethylsilanediol block **copolymer**  
RL: **IMF (Industrial manufacture)**; POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); **PREP (Preparation)**; USES (Uses)  
(**radiation-curable** siloxane group-containing hexafluoropropylene **copolymer** compns. for coatings and antireflection **films**)

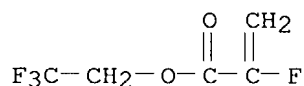
RN 95243-61-1 HCAPLUS

CN 2-Propenoic acid, 2-fluoro-, 2,2,2-trifluoroethyl ester, homopolymer (9CI)  
(CA INDEX NAME)

CM 1

CRN 74359-10-7

CMF C5 H4 F4 O2



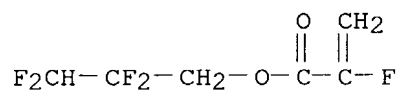
RN 96250-38-3 HCAPLUS

CN 2-Propenoic acid, 2-fluoro-, 2,2,3,3-tetrafluoropropyl ester, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 96250-37-2

CMF C6 H5 F5 O2



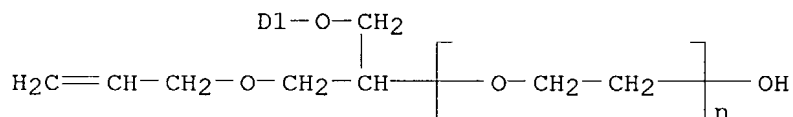
RN 305819-87-8 HCAPLUS  
 CN Silanediol, dimethyl-, polymer with 2-(ethenyloxy)ethanol, ethoxyethene, 1,1,1,2,2,3,3-heptafluoro-3-[(trifluoroethenyl)oxy]propane, 1,1,2,3,3,3-hexafluoro-1-propene and  $\alpha$ -[1-[(nonylphenoxy)methyl]-2-(2-propenyloxy)ethyl]- $\omega$ -hydroxypoly(oxy-1,2-ethanediyl), block, graft (9CI) (CA INDEX NAME)

CM 1

CRN 111144-60-6  
 CMF (C2 H4 O)<sub>n</sub> C21 H34 O3  
 CCI IDS, PMS

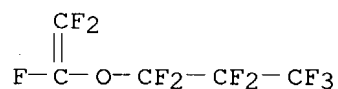


D1-(CH<sub>2</sub>)<sub>8</sub>-Me



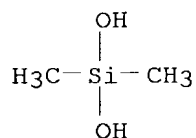
CM 2

CRN 1623-05-8  
 CMF C5 F10 O



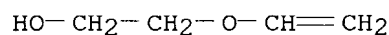
CM 3

CRN 1066-42-8  
 CMF C2 H8 O2 Si



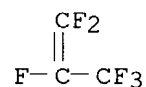
CM 4

CRN 764-48-7  
CMF C4 H8 O2



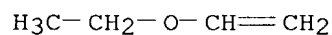
CM 5

CRN 116-15-4  
CMF C3 F6



CM 6

CRN 109-92-2  
CMF C4 H8 O



L36 ANSWER 12 OF 22 HCAPLUS COPYRIGHT 2003 ACS on STN  
AN 2000:778496 HCAPLUS  
DN 133:336602  
ED Entered STN: 07 Nov 2000  
TI **Radiation-curable**, oil- and water-repellent,  
transparent coating compositions, coating process, and coated articles  
IN Kirimoto, Kazusuke  
PA Asahi Glass Co., Ltd., Japan  
SO Jpn. Kokai Tokkyo Koho, 11 pp.  
CODEN: JKXXAF  
DT Patent  
LA Japanese  
IC ICM C09D004-00  
ICS C08L101-04; C09D005-00  
CC 42-7 (Coatings, Inks, and Related Products)  
FAN.CNT 1  
PATENT NO. KIND DATE APPLICATION NO. DATE

PI	JP 2000309725	A2	20001107	JP 1999-120548	19990427
PRAI	JP 1999-120548		19990427		

AB The compns. comprise (A) compds. having **polyfluoroalkyl** groups or polyfluoroalkenyl groups and unsatd. groups polymerizable by actinic ray, (B) compds. with mol. weight  $\geq 1000$  not having F but  $\geq 2$  unsatd. groups polymerizable by actinic ray, (C) compds. with mol. weight  $< 1000$  not having F but  $\geq 1$  unsatd. groups polymerizable by actinic ray, and (D) actinic ray polymerization initiators. Thus, 100 g of an adduct (mol. weight 1300) of dipentaerythritol partial acrylate and HDI partial isocyanurate was mixed with 76 g trimethylolpropane triacrylate, further mixed with 16 g F(CF<sub>2</sub>)<sub>n</sub>CH<sub>2</sub>CH<sub>2</sub>OCHOCH:CH<sub>2</sub> (n = 8, 10), further mixed with 8 g benzoin iso-Bu ether, applied on a glass sheet, and irradiated with UV to form a coating showing contact angle 105° to H<sub>2</sub>O and 75° to liquid paraffin, haze 3.8, 60° gloss 83%, pencil hardness 5H, and no bubbles.

ST fluoroalkyl acrylate urethane polymer coating; water repellent coating fluoroalkyl acrylate polymer; oil repellent coating fluoroalkyl acrylate polymer; transparent coating fluoroalkyl acrylate polymer

IT Polyurethanes, uses  
Polyurethanes, uses  
RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(acrylic-polyisocyanurate-, fluorine-containing; **radiation-curable**, oil- and water-repellent, transparent coating compns.)

IT Polyisocyanurates  
Polyisocyanurates  
RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(acrylic-polyurethane-, fluorine-containing; **radiation-curable**, oil- and water-repellent, transparent coating compns.)

IT Coating materials  
(oil- and water-resistant; **radiation-curable**, oil- and water-repellent, transparent coating compns.)

IT Glass substrates  
(**radiation-curable**, oil- and water-repellent, transparent coating compns.)

IT Coating materials  
(**radiation-curable**; **radiation-curable**, oil- and water-repellent, transparent coating compns.)

IT Polyesters, miscellaneous  
RL: MSC (Miscellaneous)  
(substrate; **radiation-curable**, oil- and water-repellent, transparent coating compns.)

IT Coating materials  
(transparent; **radiation-curable**, oil- and water-repellent, transparent coating compns.)

IT 423-82-5DP, polymers with acrylates 822-06-0DP, Hexamethylene diisocyanate, partial isocyanurate, reaction products with dipentaerythritol acrylate, fluoroalkyl acrylates, and other acrylates 2399-48-6DP, Tetrahydrofurfuryl acrylate, polymers with urethane acrylates and fluoroalkyl acrylates 3066-71-5DP, Cyclohexyl acrylate, polymers with urethane acrylates and fluoroalkyl acrylates 5888-33-5DP, Isobornyl acrylate, polymers with urethane acrylates and fluoroalkyl acrylates 15577-26-1DP, 2-Propenoic acid, 3,3,4,4,5,5,6,6,7,7,8,8,9,10,10,10-hexadecafluoro-9-(trifluoromethyl)decyl ester, polymers with acrylates 15625-89-5DP, Trimethylolpropane triacrylate, polymers with urethane acrylates and fluoroalkyl acrylates 17741-60-5DP, 2-

(Perfluorodecyl)ethyl acrylate, polymers with acrylates 27905-45-9DP,  
 2-(Perfluorooctyl)ethyl acrylate, polymers with acrylates 42594-17-2DP,  
 polymers with urethane acrylates and fluoroalkyl acrylates 52956-81-7DP,  
 2-Propenoic acid, 3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,11,12,12,12-  
 eicosafuoro-11-(trifluoromethyl)dodecyl ester, polymers with acrylates  
 77641-99-7DP, Dipentaerythritol acrylate, reaction products with HDI  
 partial isocyanurate, polymers with fluoroalkyl acrylates and other  
 acrylates 94108-97-1DP, Di(trimethylolpropane) tetraacrylate, polymers  
 with urethane acrylates and fluoroalkyl acrylates  
 RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or  
 engineered material use); PREP (Preparation); USES (Uses)

(**radiation-curable**, oil- and water-repellent,  
 transparent coating compns.)

IT 25038-59-9, Poly(ethylene terephthalate), miscellaneous  
 RL: MSC (Miscellaneous)  
 (substrate; **radiation-curable**, oil- and  
 water-repellent, transparent coating compns.)

L36 ANSWER 13 OF 22 HCAPLUS COPYRIGHT 2003 ACS on STN

AN 2000:181046 HCAPLUS

DN 132:223884

ED Entered STN: 21 Mar 2000

TI Siloxane-containing polymers, their manufacture, **radiation-**  
**curable** coating **compositions** based on them, and  
**films** therefrom with good abrasion and soiling resistance,  
 antistatic property, and transparency

IN Terauchi, Makoto; Hosokawa, Noritaka; Hayama, Kazuhide

PA Mitsubishi Chemical Industries Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 13 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

IC ICM C08G081-02

ICS B32B027-30; C08F290-08; C08G077-442; C08J007-04; C09D005-00;  
 C09D183-04; C09D187-00; C09J007-02

CC 42-7 (Coatings, Inks, and Related Products)

Section cross-reference(s): 38

FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI JP 2000080169	A2	20000321	JP 1999-139996	19990520
PRAI JP 1998-180874		19980626		

AB The compns. contain (A) polymers having quaternary ammonium groups,  
 (meth)acryloyl groups, and organopolysiloxane units binding to the main  
 chain via N and (B) multifunctional (meth)acrylates containing ≥3  
 (meth)acryloyl groups. Pressure-sensitive adhesive **films** having  
 a cured layer of the **composition** on the surface are also claimed.  
 Thus, 87:13 N,N-dimethylaminoethyl methacrylate-2-hydroxyethyl  
 methacrylate **copolymer** was treated with 33.3:23.2  
 IPDI-2-hydroxyethyl acrylate adduct in MEK, quaternized by MeCl, and  
 further treated with 15 parts TSF 4700 (amino-containing organopolysiloxane)  
 to obtain a polymer solution, 3.5 parts (as solid) of which was blended with  
 31.5 parts dipentaerythritol hexaacrylate, photoinitiators, and Me2CHOH to  
 give a **composition** A PET **film** coated with the  
**composition** showed surface resistivity 8.3 + 10<sup>8</sup> Ω, haze  
 3.5%, contact angle to H2O 96°, and good soiling resistance,  
 abrasion resistance, and peeling property with an adhesive tape.  
 ST acrylic siloxane graft quaternized antisoiling coating; **radiation**

- curable** coating siloxane abrasion resistance; adhesive  
**film** release coating siloxane antistatic; transparent coating  
 quaternized acrylic siloxane
- IT Coating materials  
 (UV-**curable**; siloxane-containing **radiation-  
 curable** coating compns. with good abrasion and soiling  
 resistance, antistatic property, and transparency)
- IT Coating materials  
 (abrasion-resistant; siloxane-containing **radiation-  
 curable** coating compns. with good abrasion and soiling  
 resistance, antistatic property, and transparency)
- IT Polysiloxanes, uses  
 RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or  
 engineered material use); PREP (Preparation); USES (Uses)  
 (acrylic, graft; siloxane-containing **radiation-curable**  
 coating compns. with good abrasion and soiling resistance, antistatic  
 property, and transparency)
- IT Polysiloxanes, uses  
 RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or  
 engineered material use); PREP (Preparation); USES (Uses)  
 (amino, acrylic, graft, TSF 4700; siloxane-containing **radiation-  
 curable** coating compns. with good abrasion and soiling  
 resistance, antistatic property, and transparency)
- IT Coating materials  
 (antisoiling; siloxane-containing **radiation-curable**  
 coating compns. with good abrasion and soiling resistance, antistatic  
 property, and transparency)
- IT Coating materials  
 (antistatic; siloxane-containing **radiation-curable**  
 coating compns. with good abrasion and soiling resistance, antistatic  
 property, and transparency)
- IT Adhesive tapes  
 (release coatings for; siloxane-containing **radiation-  
 curable** coating compns. with good abrasion and soiling  
 resistance, antistatic property, and transparency)
- IT Release coatings  
 (siloxane-containing **radiation-curable** coating compns.  
 with good abrasion and soiling resistance, antistatic property, and  
 transparency)
- IT Coating materials  
 (transparent; siloxane-containing **radiation-curable**  
 coating compns. with good abrasion and soiling resistance, antistatic  
 property, and transparency)
- IT 3524-68-3DP, Pentaerythritol triacrylate, reaction products with  
 hydroxy-containing acrylate-IPDI adducts, quaternized aminopolysiloxanes, and  
 polyacrylates  
 RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or  
 engineered material use); PREP (Preparation); USES (Uses)  
 (quaternized; siloxane-containing **radiation-curable**  
 coating compns. with good abrasion and soiling resistance, antistatic  
 property, and transparency)
- IT 89-32-7DP, Pyromellitic dianhydride, reaction products with  
 pentaerythritols, polymers with hydroxy-containing acrylate-IPDI adducts,  
 quaternized aminopolysiloxanes, and acrylates 818-61-1DP, 2-Hydroxyethyl  
 acrylate, adducts with IPDI, reaction products with quaternized  
 aminopolysiloxanes and acrylates 4098-71-9DP, IPDI, adducts with  
 hydroxy-containing acrylates, reaction products with quaternized  
 aminopolysiloxanes and acrylates 29570-58-9DP, Dipentaerythritol

hexaacrylate, reaction products with hydroxy-containing acrylate-IPDI adducts, quaternized aminopolysiloxanes, and acrylates 32963-33-ODP, reaction products with hydroxy-containing acrylate-IPDI adducts, quaternized aminopolysiloxanes, and acrylates 38056-88-1DP, HOA MPE, reaction products with hydroxy-containing acrylate-IPDI adducts, quaternized aminopolysiloxanes, and acrylates 42594-17-2DP, Yupimer UV-SA 1002, reaction products with hydroxy-containing acrylate-IPDI adducts, quaternized aminopolysiloxanes, and acrylates 56093-53-9DP, Viscoat 300, adducts with IPDI, reaction products with quaternized aminopolysiloxanes and acrylates 77641-99-7DP, Kayarad DPHA, reaction products with pyromellitic dianhydride, polymers with hydroxy-containing acrylate-IPDI adducts, quaternized aminopolysiloxanes, and acrylates 261350-37-2DP, reaction products with hydroxy-containing acrylate-IPDI adducts, quaternized aminopolysiloxanes, and acrylates 261350-38-3DP, reaction products with hydroxy-containing acrylate-IPDI adducts, quaternized aminopolysiloxanes, and acrylates 261350-39-4DP, reaction products with hydroxy-containing acrylate-IPDI adducts, quaternized aminopolysiloxanes, and acrylates 261350-40-7DP, reaction products with hydroxy-containing acrylate-IPDI adducts, quaternized aminopolysiloxanes, and acrylates 261350-41-8DP, reaction products with hydroxy-containing acrylate-IPDI adducts, quaternized aminopolysiloxanes, and acrylates **261350-42-9DP**, reaction products with hydroxy-containing acrylate-IPDI adducts, quaternized aminopolysiloxanes, and acrylates 261350-43-ODP, reaction products with hydroxy-containing acrylate-IPDI adducts, quaternized aminopolysiloxanes, and acrylates

RL: **IMF (Industrial manufacture)**; PRP (Properties); TEM  
(Technical or engineered material use); **PREP (Preparation)**; USES  
(Uses)

(siloxane-containing **radiation-curable** coating compns.  
with good abrasion and soiling resistance, antistatic property, and transparency)

IT **261350-42-9DP**, reaction products with hydroxy-containing acrylate-IPDI adducts, quaternized aminopolysiloxanes, and acrylates

RL: **IMF (Industrial manufacture)**; PRP (Properties); TEM  
(Technical or engineered material use); **PREP (Preparation)**; USES  
(Uses)

(siloxane-containing **radiation-curable** coating compns.  
with good abrasion and soiling resistance, antistatic property, and transparency)

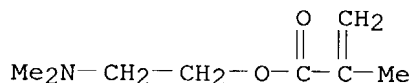
RN 261350-42-9 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, 2-(dimethylamino)ethyl ester, polymer with 2-hydroxyethyl 2-propenoate and 2,2,2-trifluoroethyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 2867-47-2

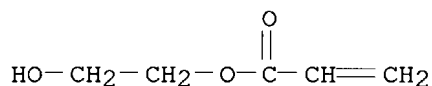
CMF C8 H15 N O2



CM 2

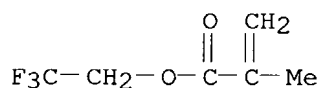


CRN 818-61-1  
CMF C5 H8 O3



CM 3

CRN 352-87-4  
CMF C6 H7 F3 O2



L36 ANSWER 14 OF 22 HCAPLUS COPYRIGHT 2003 ACS on STN  
AN 1998:531847 HCAPLUS  
DN 129:261148  
ED Entered STN: 24 Aug 1998  
TI Aggregation structure and surface properties of immobilized polysiloxane **ultrathin** films with fluoroalkyl **groups**  
AU Takahara, Atsushi; Kojio, Ken; Kajiyama, Tisato  
CS Dep. Mater. Physics Chem., Grad. Sch. Eng., Kyushu Univ., Higashi-ku, Fukuoka, 812-8581, Japan  
SO Polymer Preprints (American Chemical Society, Division of Polymer Chemistry) (1998), 39(2), 914-915  
CODEN: ACPPAY; ISSN: 0032-3934  
PB American Chemical Society, Division of Polymer Chemistry  
DT Journal  
LA English  
CC 36-6 (Physical Properties of Synthetic High Polymers)  
AB Polyalkylsiloxane and **polyfluoroalkylsiloxane** monolayers were prepared at the air/water interface by the polycondensation of hydrolyzed alkyltrichlorosilanes, [2-(perfluorooctyl)ethyl]trichlorosilane (FOETS) and [(tetrahydroperfluorododecyloxy)propyl]triethoxysilane (FDOPTES). Electron diffraction and atomic force microscopic (AFM) observation revealed that n-octadecyltrichlorosilane and FDOPTES formed crystalline monolayers with hexagonally packed alkyl and fluoroalkyl chains. N-dodecyltrichlorosilane and FOETS showed a amorphous monolayers. The magnitudes of surface free energy of fluoroalkylsilane monolayers were lower than polytetrafluoroethylene due to the orientation of fluoromethyl group at the interface. AFM observation revealed that the (amorphous/crystalline) organosilane mixed monolayers showed phase separation in which the crystalline phase formed circular domains.  
ST aggregation structure surface polysiloxane film fluoroalkyl  
IT Aggregation  
Surface free energy  
Surface pressure-area isotherms  
(aggregation structure and surface properties of immobilized polysiloxane **ultrathin** films with fluoroalkyl **groups**)

)

IT Polysiloxanes, properties  
 Polysiloxanes, properties  
 RL: PEP (Physical, engineering or chemical process); PRP (Properties);  
 PROC (Process)  
 (fluorine-containing; aggregation structure and surface properties of  
 immobilized polysiloxane **ultrathin** films with fluoroalkyl  
**groups**)

IT Fluoropolymers, properties  
 Fluoropolymers, properties  
 RL: PEP (Physical, engineering or chemical process); PRP (Properties);  
 PROC (Process)  
 (polysiloxane-; aggregation structure and surface properties of  
 immobilized polysiloxane **ultrathin** films with fluoroalkyl  
**groups**)

IT Polymer morphology  
 (surface; aggregation structure and surface properties of immobilized  
 polysiloxane **ultrathin** films with fluoroalkyl **groups**  
 )

IT 112-04-9, n-Octadecyltrichlorosilane 4484-72-4, Dodecyltrichlorosilane  
 78560-44-8, [2-(Perfluorooctyl)ethyl]trichlorosilane 125282-19-1,  
 18-Nonadecenyltrichlorosilane 125282-19-1D, 18-  
 Nonadecenyltrichlorosilane, carboxy derivative 146267-58-5,  
 [2-(Perfluorooctyl)ethyl]trichlorosilane homopolymer 156248-22-5,  
 n-Octadecyltrichlorosilane hydrolytic homopolymer 213464-97-2  
 213464-98-3  
 RL: PEP (Physical, engineering or chemical process); PRP (Properties);  
 PROC (Process)  
 (aggregation structure and surface properties of immobilized  
 polysiloxane **ultrathin** films with fluoroalkyl **groups**  
 )

RE.CNT 8 THERE ARE 8 CITED REFERENCES AVAILABLE FOR THIS RECORD  
 RE

- (1) Ge, S; J Vac Sci Technol A 1994, V12, P2530 HCAPLUS
- (2) Ge, S; Langmuir 1995, V11, P1341 HCAPLUS
- (3) Kajiyama, T; Bull Chem Soc Japan 1992, V65, P864 HCAPLUS
- (4) Kajiyama, T; Supramolecular Sci 1996, V3, P123 HCAPLUS
- (5) Kojio, K; Langmuir 1998, V14, P971 HCAPLUS
- (6) Maoz, R; J Colloid Interface Sci 1984, V100, P465 HCAPLUS
- (7) Owens, D; J Appl Polym Sci 1969, V13, P1741 HCAPLUS
- (8) Takahara, A; J Vac Sci Technol A 1996, V14, P1747 HCAPLUS

L36 ANSWER 15 OF 22 HCAPLUS COPYRIGHT 2003 ACS on STN

AN 1998:527955 HCAPLUS

ED Entered STN: 21 Aug 1998

TI Aggregation structure and surface properties of immobilized polysiloxane  
**ultrathin** films with fluoroalkyl **groups**.

AU Takahara, A.; Kojio, K.; Kajiyama, T.

CS Graduate School Engineering, Kyushu University, Fukuoka, 812-8581, Japan

SO Book of Abstracts, 216th ACS National Meeting, Boston, August 23-27  
 (1998), POLY-242 Publisher: American Chemical Society, Washington, D. C.  
 CODEN: 66KYA2

DT Conference; Meeting Abstract

LA English

AB Polyalkylsiloxane and **polyfluoroalkylsiloxane** monolayers were  
 prepared at the air/water interface by the polycondensation of hydrolyzed  
 alkyltrichlorosilanes, [2-(perfluorooctyl)ethyl] trichlorosilane (FOETS)  
 and [(perfluorododecyloxy)propyl]triethoxysilane (FDOPTES). Electron

diffraction(ED) and atomic force microscopic (AFM) observation revealed that n-octadecyl-trichlorosilane(OTS) and FDOPTES formed crystalline monolayers with hexagonally packed alkyl and fluoroalkyl chains. On the other hand, n-dodecyltrichlorosilane (DDTS) and FOETS showed a amorphous monolayers. The magnitudes of surface free energy of fluoroalkylsilane monolayers were lower than polytetrafluoroethylene due to the orientation of fluoromethyl group at the interface. AFM observation revealed that the (amorphous/crystalline) organosilane mixed monolayers showed phase separation in which crystalline phase formed circular domains.

L36 ANSWER 16 OF 22 HCAPLUS COPYRIGHT 2003 ACS on STN  
AN 1998:512482 HCAPLUS  
DN 129:203728

ED Entered STN: 18 Aug 1998  
TI UV-durable polymers, their manufacture, their use as additives for synthetic resins, and resin compositions  
IN Amata, Yuriko; Yamamoto, Hiroshi; Yokoyama, Mika  
PA Asahi Glass Co., Ltd., Japan  
SO Jpn. Kokai Tokkyo Koho, 10 pp.  
CODEN: JKXXAF

DT Patent  
LA Japanese  
IC ICM C08F002-38  
ICS C08F220-10; C08F220-22; C08F220-30; C08F220-34; C08F220-38;  
C08L027-06; C08L033-14; C08L101-00

CC 37-6 (Plastics Manufacture and Processing)  
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 10212305	A2	19980811	JP 1997-19166	19970131
PRAI	JP 1997-19166		19970131		

OS MARPAT 129:203728

AB Polymers are manufactured by radical polymerization of **UV**-absorbing **group**-containing polymerizable compds. and optionally polymerizable compds. free from **UV**-absorbing **groups** and **polyfluoroalkyl** groups in the presence of chain transfer agents comprising **polyfluoroalkyl**- and SH-containing compds. Thus, 0.10 mol Me methacrylate and 0.03 mol 2-(2-hydroxy-5'-methacryloxyethylphenyl)-2H-benzotriazole were polymerized in the presence of CF3(CF2)7CH2CH2SH and AIBN in PhMe at 70° for 8 h to give a polymer showing mol. weight 14,000, polydispersity 1.74, and F content 2.1%. A blend of the polymer 1, poly(vinyl chloride) 100, TN 1000 (dibutyltin maleate) 3, and stearic acid 0.5 part showed melt viscosity 8.8 + 103 P, haze 4.5, and good water repellency and soil and weather resistance.

ST chain transfer agent fluoroalkyl mercaptan; PVC UV absorbing telomer; telomer fluoroalkyl terminated UV absorbent

IT Chain transfer agents  
(fluoroalkyl mercaptans; preparation of UV-absorbing fluoroalkyl-terminated polymers as additives for plastics)

IT Thiols (organic), preparation  
RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)  
(fluoroalkyl, telomers with Me methacrylate and benzotriazole-containing monomer; preparation of UV-absorbing fluoroalkyl-terminated polymers as additives for plastics)

IT Alkyl iodides  
RL: RCT (Reactant); RACT (Reactant or reagent)

(fluoroalkyl; preparation of UV-absorbing fluoroalkyl-terminated polymers as additives for plastics)

IT UV stabilizers  
(preparation of UV-absorbing fluoroalkyl-terminated polymers as additives for plastics)

IT Telomers (polymers)  
RL: IMF (Industrial manufacture); MOA (Modifier or additive use); PRP (Properties); PREP (Preparation); USES (Uses)  
(preparation of UV-absorbing fluoroalkyl-terminated polymers as additives for plastics)

IT Plastics, properties  
RL: POF (Polymer in formulation); PRP (Properties); USES (Uses)  
(preparation of UV-absorbing fluoroalkyl-terminated polymers as additives for plastics)

IT Polymerization  
(radical; preparation of UV-absorbing fluoroalkyl-terminated polymers as additives for plastics)

IT 34143-74-3P 212248-66-3P  
RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)  
(chain transfer agents; preparation of UV-absorbing fluoroalkyl-terminated polymers as additives for plastics)

IT 212248-63-0P 212248-64-1P 212248-65-2P 212248-67-4P  
RL: IMF (Industrial manufacture); MOA (Modifier or additive use); PRP (Properties); PREP (Preparation); USES (Uses)  
(preparation of UV-absorbing fluoroalkyl-terminated polymers as additives for plastics)

IT 9002-86-2P, Poly(vinyl chloride)  
RL: IMF (Industrial manufacture); POF (Polymer in formulation); PRP (Properties); PREP (Preparation); USES (Uses)  
(preparation of UV-absorbing fluoroalkyl-terminated polymers as additives for plastics)

IT 62-56-6, Thiourea, reactions 1513-88-8 2043-53-0  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(preparation of UV-absorbing fluoroalkyl-terminated polymers as additives for plastics)

L36 ANSWER 17 OF 22 HCAPLUS COPYRIGHT 2003 ACS on STN

AN 1998:430729 HCAPLUS

DN 129:123836

ED Entered STN: 13 Jul 1998

TI fluorine-containing (meth)acryl-terminated compounds, optical thin films from coatings containing them, and antireflective materials covered with the coatings

IN Atarashi, Mikio; Oka, Koichiro

PA Toray Industries, Inc., Japan

SO Jpn. Kokai Tokkyo Koho, 8 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

IC ICM C07C271-16

ICS C07C271-64; G02B001-11

CC 42-7 (Coatings, Inks, and Related Products)

Section cross-reference(s): 73

FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 10182585	A2	19980707	JP 1996-348488	19961226

PRAI JP 1996-348488 19961226  
 OS MARPAT 129:123836  
 AB The F-containing compds. comprise  $\text{AlO}(\text{CH}_2)_n\text{Rf}(\text{CH}_2)_n\text{OA}_2$  (I;  $\text{Al}$ ,  $\text{A}_2$  =  $\text{CH}_2:\text{CRCONHCO}$ ,  $\text{CH}_2:\text{CRCO}_2\text{CH}_2\text{CH}_2\text{NHCO}$ ;  $\text{R}$  = H, Me;  $\text{Rf}$  = perfluoroalkylene;  $n$  = 0-3). The optical thin **films** use the above compds. The antireflective materials are obtained by laminating the above thin **films** on substrates. Thus, a **composition** containing I [ $\text{Al}$  =  $\text{CH}_2:\text{CMeCO}_2\text{CH}_2\text{CH}_2\text{NHCO}$ ;  $n$  = 1;  $\text{Rf}$  =  $(\text{CF}_2)_8$ ; obtained from  $\text{HOCH}_2(\text{CF}_2)_8\text{CH}_2\text{OH}$  and Karenzu MOI] 20, 2-hydroxy-2-methyl-1-phenylpropan-1-one 0.4, and  $\text{Me}_2\text{CHOH}$  90 parts was applied on a polycarbonate substrate and **cured** by UV **radiation** to give a product showing low reflection and good scratching resistance.

ST methacrylamide fluoroalkylene **copolymer** optical coating antireflection; methacryloxyethylamide fluoroalkylene **copolymer** optical coating antireflection; acrylamide fluoroalkylene **copolymer** optical coating antireflection; acryloxyethylamide fluoroalkylene **copolymer** optical coating antireflection; scratch resistance fluoro acrylic polymer antireflection

IT Antireflective **films**  
 (antireflective and scratch-resistant materials coated with (meth)acryl-terminated fluoroalkylene-based polymers)

IT Coating materials  
 (scratch-resistant; antireflective and scratch-resistant materials coated with (meth)acryl-terminated fluoroalkylene-based polymers)

IT **210296-25-6P 210296-26-7P 210296-27-8P 210296-28-9P**  
 RL: **IMF (Industrial manufacture)**; PRP (Properties); TEM (Technical or engineered material use); **PREP (Preparation)**; USES (Uses)  
 (antireflective and scratch-resistant materials coated with (meth)acryl-terminated fluoroalkylene-based polymers from)

IT 210296-23-4P 210296-24-5P  
 RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)  
 (antireflective and scratch-resistant materials coated with (meth)acryl-terminated fluoroalkylene-based polymers from)

IT 754-96-1 4474-60-6 30674-80-7, Karenzu MOI  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (monomers from; antireflective and scratch-resistant materials coated with (meth)acryl-terminated fluoroalkylene-based polymers)

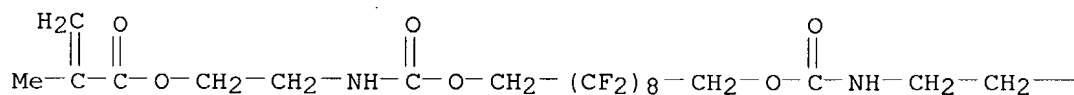
IT **210296-25-6P 210296-26-7P 210296-27-8P 210296-28-9P**  
 RL: **IMF (Industrial manufacture)**; PRP (Properties); TEM (Technical or engineered material use); **PREP (Preparation)**; USES (Uses)  
 (antireflective and scratch-resistant materials coated with (meth)acryl-terminated fluoroalkylene-based polymers from)

RN 210296-25-6 HCAPLUS  
 CN 2-Propenoic acid, 2-methyl-, 7,7,8,8,9,9,10,10,11,11,12,12,13,13,14,14-hexadecafluoro-4,17-dioxo-5,16-dioxo-3,18-diazaeicosane-1,20-diyl ester, homopolymer (9CI) (CA INDEX NAME)

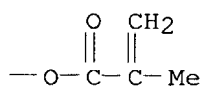
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CRN 210296-23-4  
 CMF C24 H24 F16 N2 O8

PAGE 1-A



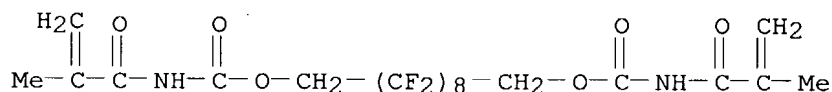
PAGE 1-B



RN 210296-26-7 HCAPLUS  
 CN Carbamic acid, (2-methyl-1-oxo-2-propenyl)-, 2,2,3,3,4,4,5,5,6,6,7,7,8,8,9,9-hexadecafluoro-1,10-decanediyl ester, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 210296-24-5  
 CMF C20 H16 F16 N2 O6

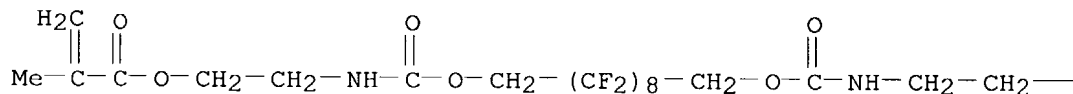


RN 210296-27-8 HCAPLUS  
 CN 2-Propenoic acid, 2-methyl-, (2,2,3,3,4,4,5,5,6,6,7,7,8,8,9,9-hexadecafluoro-1,10-hexanediyl)bis(oxycarbonylimino-2,1-ethanediyl) ester, polymer with 2-ethyl-2-[[[(1-oxo-2-propenyl)oxy]methyl]-1,3-propanediyl di-2-propenoate and 3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,10-heptadecafluorodecyl 2-propenoate (9CI) (CA INDEX NAME)

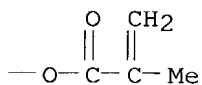
CM 1

CRN 210296-23-4  
 CMF C24 H24 F16 N2 O8

PAGE 1-A



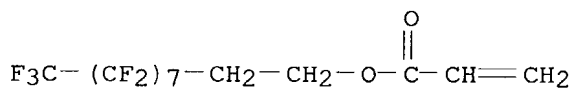
PAGE 1-B



CM 2

CRN 27905-45-9

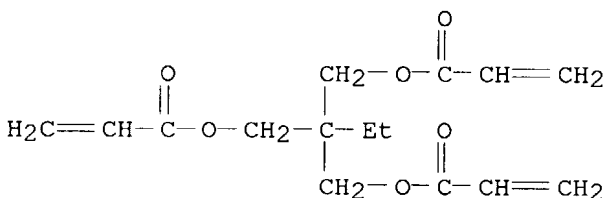
CMF C13 H7 F17 O2



CM 3

CRN 15625-89-5

CMF C15 H20 O6



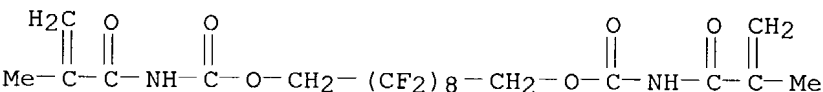
RN 210296-28-9 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, 2-(hydroxymethyl)-2-[[[(2-methyl-1-oxo-2-propenyl)oxy]methyl]-1,3-propanediyl ester, polymer with 2,2,3,3,4,4,5,5,6,6,7,7,8,8,9,9-hexadecafluoro-1,10-hexanediyl bis[(2-methyl-1-oxo-2-propenyl)carbamate] and 2-(hydroxymethyl)-2-[[[(1-oxo-2-propenyl)oxy]methyl]-1,3-propanediyl di-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 210296-24-5

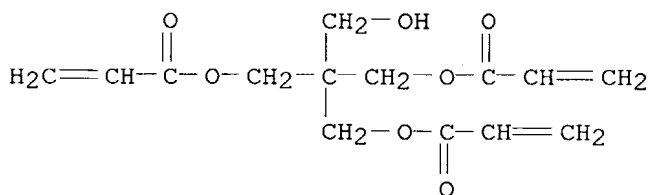
CMF C20 H16 F16 N2 O6



CM 2

CRN 3524-68-3

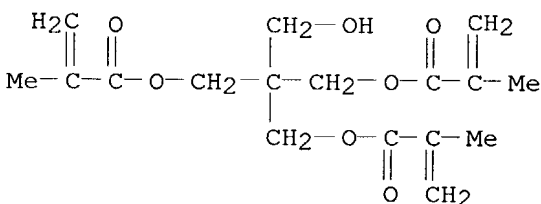
CMF C14 H18 O7



CM 3

CRN 3524-66-1

CMF C17 H24 O7



L36 ANSWER 18 OF 22 HCAPLUS COPYRIGHT 2003 ACS on STN

AN 1994:606945 HCAPLUS

DN 121:206945

ED Entered STN: 29 Oct 1994

TI **Radiation-curable compositions** containing  
**copolymers** of fluorine-containing polyethers and polyunsaturated monomers

IN Watakabe, Atsushi; Ooharu, Kazuya

PA Asahi Glass Co Ltd, Japan

SO Jpn. Kokai Tokkyo Koho, 8 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

IC ICM C08F299-00

ICS C08J003-24; C08J007-00; C08L029-10

CC 37-6 (Plastics Manufacture and Processing)

Section cross-reference(s): 35

FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 06136074	A2	19940517	JP 1992-309340	19921023
JP 1992-309340		19921023		

AB The title **copolymers**, having good heat resistance after curing, are prepared from F2C:CFO[CF2CF(CF3)O]<sub>n</sub>(CF2)mCF:CFCF3 (I; m, n = 1-3), other F-containing monomers, and crosslinking monomers. A mixture of 10 parts **copolymer** of I (m = n = 1) and F2C:CF2 and 1 part triallyl isocyanurate was hot-pressed and irradiated with an electron beam to give a cured **film** with modulus 5 + 108 dyne/cm<sup>2</sup> at 200°.

ST fluoro polyether triallyl isocyanurate crosslinking radiochem;  
tetrafluoroethylene **copolymer** crosslinking radiochem;  
fluoropolymer triallyl isocyanurate crosslinking radiochem



IT Electron beam  
(crosslinking by, of fluorine-containing polyethers containing triallyl isocyanurate)

IT Heat-resistant materials  
(fluorine-containing polyethers, radiation-crosslinked, preparation of)

IT Polyethers, preparation  
RL: IMF (Industrial manufacture); PREP (Preparation)  
(fluorine-containing, preparation of radiation-crosslinked, heat-resistant)

IT Fluoropolymers  
RL: IMF (Industrial manufacture); PREP (Preparation)  
(polyether-, preparation of radiation-crosslinked, heat-resistant)

IT Crosslinking  
(radiochem., of fluorine-containing polyethers containing triallyl isocyanurate)

IT **158199-17-8P**  
RL: **PREP (Preparation)**  
(preparation of radiation-crosslinked, heat-resistant)

IT **158199-17-8P**  
RL: **PREP (Preparation)**  
(preparation of radiation-crosslinked, heat-resistant)

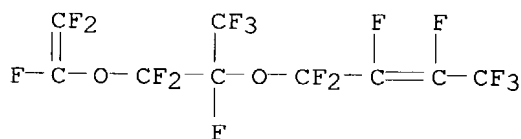
RN 158199-17-8 HCAPLUS

CN 1,3,5-Triazine-2,4,6(1H,3H,5H)-trione, 1,3,5-tri-2-propenyl-, polymer with 1-[1-[difluoro[(trifluoroethenyl)oxy]methyl]-1,2,2,2-tetrafluoroethoxy]-1,1,2,3,4,4,4-heptafluoro-2-butene and tetrafluoroethene (9CI) (CA INDEX NAME)

CM 1

CRN 152636-82-3

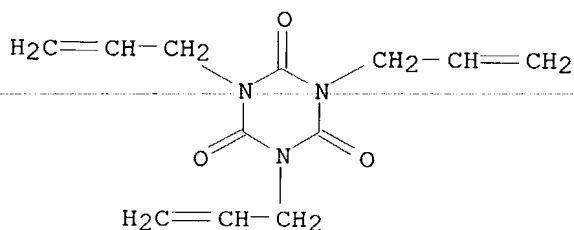
CMF C9 F16 O2



CM 2

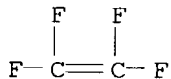
CRN 1025-15-6

CMF C12 H15 N3 O3



CM 3

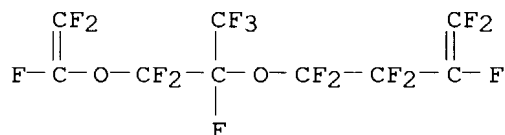
CRN 116-14-3  
CMF C2 F4



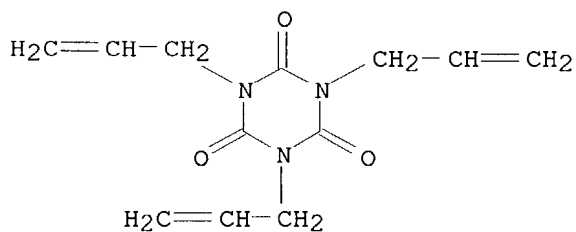
L36 ANSWER 19 OF 22 HCAPLUS COPYRIGHT 2003 ACS on STN  
AN 1994:535635 HCAPLUS  
DN 121:135635  
ED Entered STN: 17 Sep 1994  
TI Preparation and curing of radiation-curable  
fluoropolymer compositions  
IN Watakabe, Atsushi  
PA Asahi Glass Co Ltd, Japan  
SO Jpn. Kokai Tokkyo Koho, 8 pp.  
CODEN: JKXXAF  
DT Patent  
LA Japanese  
IC ICM C08L027-12  
ICS C08F002-46; C08F214-18; C08F299-00; C08F299-02; C08K005-00  
ICA C08F216-12  
CC 37-6 (Plastics Manufacture and Processing)  
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 06136218	A2	19940517	JP 1992-309341	19921023
PRAI	JP 1992-309341		19921023		
AB	Moldable mixts. of crosslinking agents and copolymers of F2C:CFO[CF2CF(CF3)O]n(CF2)mCF:CF2 (n, m = 1-3) and other monomers including ≥1 F-containing monomer are prepared, molded, and radiochem. cured to give materials having good mech. properties. A 12:88 (mol) F2C:CFOCF2CF(CF3)OCF2CF2CF:CF2-F2C:CF2 copolymer was prepared in Freon 113 in the presence of diisopropyl peroxydicarbonate and MeOH, mixed with 10% triallyl isocyanurate, pressed at 170°, and irradiated with an electron beam to give a crosslinked film having a high tensile modulus.				
ST	fluoropolymer polyether crosslinking radiochem; tetrafluoroethylene copolymer crosslinking radiochem; fluorovinyl fluorobutenyl ether tetrafluoroethylene copolymer; triallyl isocyanurate crosslinking fluoropolymer				
IT	Electron beam (crosslinking by, of fluoropolymer-polyethers, for good mech. properties)				
IT	Polyethers, preparation RL: PREP (Preparation) (fluorine-containing, preparation of radiochem. crosslinked, with good mech. properties)				
IT	Fluoropolymers RL: PREP (Preparation) (polyether-, preparation of radiochem. crosslinked, with good mech. properties)				
IT	Crosslinking (radiochem., of fluoropolymer-polyethers, for good mech. properties)				

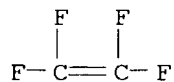
IT Crosslinking agents  
 (radiochem., trialkenyl isocyanurates, for fluoropolymer-polyethers)  
 IT 157200-89-0P 157200-90-3P  
 RL: PREP (Preparation)  
 (preparation of radiochem. crosslinked, with good mech. properties)  
 IT 157200-89-0P  
 RL: PREP (Preparation)  
 (preparation of radiochem. crosslinked, with good mech. properties)  
 RN 157200-89-0 HCAPLUS  
 CN 1,3,5-Triazine-2,4,6(1H,3H,5H)-trione, 1,3,5-tri-2-propenyl-, polymer with  
 4-[1-{difluoro[(trifluoroethenyl)oxy]methyl}-1,2,2,2-tetrafluoroethoxy]-  
 1,1,2,3,3,4,4-heptafluoro-1-butene and tetrafluoroethene (9CI) (CA INDEX  
 NAME)  
 CM 1  
 CRN 123767-35-1  
 CMF C9 F16 O2



CM 2  
 CRN 1025-15-6  
 CMF C12 H15 N3 O3



CM 3  
 CRN 116-14-3  
 CMF C2 F4



AN 1992:195784 HCAPLUS  
 DN 116:195784  
 ED Entered STN: 16 May 1992  
 TI Preparation of curable fluoroalkyl group-containing polymeric electric insulators  
 IN Hashimoto, Yutaka; Shirakami, Jun; Kamei, Masayuki  
 PA Dainippon Ink Chemical Industry Co., Japan  
 SO Eur. Pat. Appl., 68 pp.  
 CODEN: EPXXDW  
 DT Patent  
 LA English  
 IC ICM H01B003-44  
 ICS H01B003-40; C08G065-22; C08G059-30; C08F014-18; C08F114-18; C08F214-18  
 CC 38-3 (Plastics Fabrication and Uses)  
 Section cross-reference(s): 76

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 430722	A2	19910605	EP 1990-313122	19901203
	EP 430722	A3	19930421		
	R: DE, GB				
	JP 04028772	A2	19920131	JP 1990-334429	19901130
	JP 3008493	B2	20000214		
PRAI	JP 1989-312403	A	19891201		
	JP 1990-110177	A	19900427		

AB Title insulators, useful for elec. wires and cables, comprising a **polyfluoroalkyl** group-containing ethylenically  $\alpha,\beta$ -unsatd. monomer or a **polyfluoroalkyl** group-containing monoepoxy monomer, are coated on a conductor and cured by irradiation or heating. An elec. conductor coated with a composition comprising  $\text{CH}_2:\text{CHCO}_2\text{CH}_2(\text{CF}_2)_{10}\text{H}$  (I) 85.6, trimethylolpropane tri(meth)acrylates 11.4,  $\gamma$ -mercaptopropyl trimethoxysilane 2.0, and 2-hydroxy-2-methyl-1-phenyl-1-propanone photoinitiator 1.0 part was irradiated to give an insulator having dielec. breakdown voltage 31 kV/mm, volume resistivity coefficient  $2.0 + 10^{17}$ , and dielec. constant 2.0, compared with 13,  $6.6 + 10^{12}$ , and 3.8, resp., for an insulator containing  $\text{n-C}_{11}\text{C}_{21}\text{CO}_2\text{CH}:\text{CH}_2$  instead of I.

ST elec insulator fluoropolymer; polymethacrylate elec insulator; polyacrylate elec insulator; fluoroalkyl epoxy polymer elec insulator; crosslinking radiochem fluoroalkyl insulator

IT Electric insulators and Dielectrics  
 (curable **polyfluoroalkyl** group-containing monomers for, for wires and cables)

IT Fluoropolymers  
 RL: USES (Uses)  
 (elec. insulators, heat- and **radiochem. curable**)

IT Fluoropolymers  
 RL: USES (Uses)  
 (epoxy, elec. insulators, heat- and **radiochem. curable**)

IT Epoxy resins, uses  
 RL: USES (Uses)  
 (fluorine-containing, elec. insulators, heat- and **radiochem. curable**)

IT Vinyl compounds, polymers  
 RL: PREP (Preparation)  
 (polymers, elec. insulators containing, preparation of curable)

IT Polyoxymethylenes, preparation

RL: PREP (Preparation)  
 (polyoxyalkylene-, fluorine-containing, preparation of  
 fluoroacrylate-containing,  
 elec. insulators)  
 IT Fluoropolymers  
 RL: PREP (Preparation)  
 (polyoxyalkylene-polyoxymethylene-, preparation of  
 fluoroacrylate-containing,  
 elec. insulators)  
 IT Polyoxyalkylenes, preparation  
 RL: PREP (Preparation)  
 (polyoxymethylene-, fluorine-containing, preparation of  
 fluoroacrylate-containing,  
 elec. insulators)  
 IT Crosslinking  
 (radiochem., in **polyfluoroalkyl** group-containing elec. insulator  
 manufacture)  
 IT Crosslinking  
 (thermal, in **polyfluoroalkyl** group-containing elec. insulator  
 manufacture)  
 IT 75-38-7DP, Vinylidene fluoride, polymers with acrylic acid derivs. and  
 fluoroalkyl group-containing monomers 79-10-7DP, 2-Propenoic acid, derivs.,  
 polymers with fluoroalkyl group-containing monomers 105-76-0DP, polymers  
 with acrylic acid derivs. and fluoroalkyl group-containing monomers  
 407-47-6DP, polymers with acrylic acid derivs. and fluoroalkyl acrylates  
 407-47-6DP, polymers with perfluoropolymer-polyoxyalkylenes 2357-60-0DP,  
 polymers with acrylic acid derivs. and fluoroalkyl acrylates  
 2357-60-0DP, polymers with acrylic acid derivs. and unsatd. monomers  
 5888-33-5DP, Isobornyl acrylate, polymers with acrylic acid derivs. and  
 unsatd. fluoroalkyl monomers 7347-19-5DP, polymers with acrylic acid  
 derivs. and fluoroalkyl acrylates 17741-60-5DP, polymers with  
 fluoroalkyl acrylates 27905-45-9DP, polymers with acrylic acid derivs.  
 and fluoroalkyl group-containing monomers 90571-08-7P 92708-15-1P  
 96250-35-0DP, polymers with acrylic acid derivs. and fluoroalkyl acrylates  
 139994-60-8DP, polymers with acrylic acid derivs. and fluoroalkyl  
 acrylates 139995-02-1DP, polymers with acrylic acid derivs. and unsatd.  
 monomers 140127-74-8P 140127-75-9P 140127-76-0P 140127-77-1P  
 140127-78-2P 140127-79-3P 140127-81-7P 140127-82-8P 140127-84-0DP,  
 reaction products with acrylic acid derivs. and phenoxy Et acrylate  
 140127-85-1DP, reaction products with acrylic acid derivs. 140127-86-2P  
 140127-87-3P 140127-89-5P 140842-46-2P  
 RL: PREP (Preparation)  
 (elec. insulators, preparation of)

L36 ANSWER 21 OF 22 HCAPLUS COPYRIGHT 2003 ACS on STN  
 AN 1986:159635 HCAPLUS  
 DN 104:159635  
 ED Entered STN: 03 May 1986  
 TI Compositions for photoresist release  
 IN Ono, Jusuke; Otoshi, Yukio  
 PA Asahi Glass Co., Ltd., Japan  
 SO Jpn. Kokai Tokkyo Koho, 4 pp.  
 CODEN: JKXXAF  
 DT Patent  
 LA Japanese  
 IC ICM G03C011-00  
 ICS G03F007-00  
 CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other

Reprographic Processes)

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 60208752	A2	19851021	JP 1984-65264	19840403
	JP 03074827	B4	19911128		
PRAI	JP 1984-65264		19840403		

AB The title compns. contain an oligomeric polymer of an unsatd. ester having a C4-20 **polyfluoroalkyl** group and/or an oligomeric copolymer of the ester with a copolymerizable compd(s). The compns. make possible the effective release of resists in both development and release processes. Thus, a resist material, prepared by coating a Si wafer with a resist comprising Me methacrylate-methacrylic acid copolymer, was prebaked, pattern-wise irradiated with an electron beam, and then treated with 1,1,1-trichloroethane containing 1 weight% of a F-containing oligomer prepared from

CH<sub>2</sub>:CHCO<sub>2</sub>(CH<sub>2</sub>)<sub>2</sub>C<sub>9</sub>F<sub>19</sub> and benzyl methacrylate to release the soluble parts of the resist. The treatment time required to release the resist was 1 min vs. 2 min for a control containing no oligomer.

ST **polyfluoroalkyl group oligomer photoresist** releasing

IT Acrylic polymers, uses and miscellaneous

RL: USES (Uses)

(fluorine-containing oligomeric, release compns. containing, for photoresists)

IT Resists

(photo-, release compns. containing oligomeric fluorine-containing polymer for)

IT 99732-40-8 101052-53-3 101407-82-3

RL: USES (Uses)

(oligomeric, release compns. containing, for photoresists)

IT 71-55-6 108-95-2, uses and miscellaneous 127-18-4, uses and miscellaneous 27176-87-0

RL: USES (Uses)

(release compns. containing oligomeric fluorine-containing polymer and, for photoresists)

L36 ANSWER 22 OF 22 HCAPLUS COPYRIGHT 2003 ACS on STN

AN 1962:449095 HCAPLUS

DN 57:49095

OREF 57:9746c-g

ED Entered STN: 22 Apr 2001

TI Hydroxy ketones

IN Siegrist, Adolf E.; Maeder, Erwin; Duennenberger, Max

PA CIBA Ltd.

SO 5 pp.

DT Patent

LA Unavailable

NCL 12Q

CC 29 (Noncondensed Aromatic Compounds)

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	DE 1093373		19580227	DE	
PRAI	CH		19570306		

AB 4-Phenylbenzophenone derivs., which are substituted with OH **groups** are suitable as **light**-protection agents, particularly in the ultraviolet region and are prepared by treating 4-diphenylcarboxylic acid (I) in the presence of BF<sub>3</sub> with phenol derivs. or by treating the chloride

or ester of I with phenol derivs. in the presence of Friedel-Crafts catalysts. Thus, BF<sub>3</sub> 180 was passed into a stirred solution of 1,3-dihydroxybenzene 222 and I 396 in tetrachloroethane 800 parts by volume while the temperature was kept at 45°. Then the mixture was stirred 5 hrs. in a steam bath, cooled and poured into a solution of NaOAc 550 in water 5000 parts. After leaving the mixture overnight it was filtered and the precipitate recrystd. from MeOH 1700 parts by volume to obtain 2,4-dihydroxy-4'-phenylbenzophenone 394 parts, m. 183-4° (EtOH), which was also obtained in 91.5% yield by treating I first with SOCl<sub>2</sub> and, after evaporation of excess SOCl<sub>2</sub>, with AlCl<sub>3</sub> as catalyst. Similarly, I 991 was treated with SOCl<sub>2</sub> 5000 to prepare the chloride, which was mixed at 25-30° with 1,3-dimethoxybenzene 691, nitrobenzene 2800 parts by volume, and AlCl<sub>3</sub> 716 parts. After 2 hrs. the mixture was heated to 80°, stirred at that temperature 4 hrs., cooled, and poured into a mixture of water 3000, ice 7000, and HCl 350 parts by volume. The organic layer was separated, neutralized,

and steam distilled. The residue was crystallized from EtOH to obtain in 56.5% yield 4-methoxy-2-hydroxy-4'-phenylbenzophenone, m. 105-6° (CHCl<sub>3</sub>), λ 292 mμ and 325 mμ. Other 4'-phenylbenzophenones, which were made by a similar method were: 4-ethoxy-2-hydroxy, m. 114-15°, λ (EtOH) 292 mμ and 325 mμ, 5-methyl-2-hydroxy (II), m. 79-80° (64 % yield), λ (EtOH) 291 and 345 mμ, 5-phenyl-2-hydroxy, m. 135.5-6.0°, λ 250, 286, 359 mμ. II was also prepared by treating the chloride of I with p-cresol to obtain the p-toly ester of I, m. 127-8°, which was then treated with AlCl<sub>3</sub>.

- IT Ketones  
(aryl **polyfluoroalkyl**)
- IT Ketones  
(hydroxy, manufacture and spectra of)
- IT Catalysts and Catalysis  
(in acylation, of phenols, AlCl<sub>3</sub> and BF<sub>3</sub> as)
- IT Spectra, visible and ultraviolet  
(of hydroxybenzophenones)
- IT Acylation  
(of phenols, AlCl<sub>3</sub> and BF<sub>3</sub> as catalysts in)
- IT Cosmetics  
(sunburn-preventing and tanning, hydroxybenzophenones as)
- IT 7446-70-0, Aluminum chloride 7637-07-2, Boron fluoride  
(catalysts, in acylation of phenols)
- IT 71-43-2, Benzene  
(derivatives, oxidation of **polyfluoroalkyl**)
- IT 90986-69-9, Benzophenone, 2-hydroxy-4-methoxy-4'-phenyl- 94464-99-0,  
Benzophenone, 2-hydroxy-5-methyl-4'-phenyl- 94866-77-0, Benzophenone,  
4-ethoxy-2-hydroxy-4'-phenyl- 95818-93-2, Benzophenone,  
2-hydroxy-4',5-diphenyl-  
(manufacture and spectrum of)
- IT 36130-57-1, Benzophenone, 2,4-dihydroxy-4'-phenyl- 85090-14-8,  
4-Biphenylcarboxylic acid, p-tolyl ester 97829-54-4, Acetophenone,  
2,2'-p-phenylenebis[2',4'-dihydroxy-  
(preparation of)

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